

Compaq Server Console Switch

User Guide

Part Number 141555-003

October 2002 (Third Edition)

COMPAQ

© 2002 Compaq Information Technologies Group, L.P.

Compaq and the Compaq logo are trademarks of Compaq Information Technologies Group, L.P. in the U.S. and/or other countries.

All other product names mentioned herein may be trademarks of their respective companies.

Compaq shall not be liable for technical or editorial errors or omissions contained herein. The information in this document is provided “as is” without warranty of any kind and is subject to change without notice. The warranties for Compaq products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.

Compaq Server Console Switch User Guide

October 2002 (Third Edition)

Part Number 141555-003

Contents

About This Guide

Important Safety Information	ix
Symbols on Equipment	ix
Rack Stability.....	xi
Symbols in Text.....	xi
Text Conventions.....	xii
Getting Help.....	xii
Compaq Technical Support.....	xii
Compaq Website	xiii
Compaq Authorized Reseller	xiii
Reader's Comments.....	xiii

Chapter 1

Introduction

Product Overview	1-1
Features.....	1-2
Configurations	1-4
Available Models.....	1-7

Chapter 2

Hardware Installation

Installation Checklist	2-1
Kit Contents	2-1
Required Tools.....	2-2

Installing the Hardware	2-2
2-Port Side-Mount 0U Installation	2-2
Side-Mount 0U Installation	2-5
Rear Rack Installation.....	2-9
Standard 1U Installation	2-11
Completing the Installation	2-15

Chapter 3

Cabling

Cable Information	3-1
Cable Locking Mechanism	3-2
Connecting the Cables.....	3-3
Connecting the Power Cable to the Dual Console 8-Port DC Switch Box	3-6
Switch Box Startup Behavior.....	3-8
Computer Startup Behavior.....	3-9
Configuring the Console Switch	3-9
Unattended Reboot.....	3-9
Resetting the Unit.....	3-9
Making Connections Under Power	3-10
Alternate Configurations	3-10
Tiered Switch Configurations.....	3-11
Connecting Tiers while the System is Powered Up.....	3-12
Dual Console Configuration.....	3-13

Chapter 4

Using the OSD

On-Screen Display	4-1
Alternate Languages	4-1
Functions	4-1

Navigation.....	4-2
Menu Overview.....	4-4
OSD Main Screen.....	4-5
Setup Screen.....	4-7
Commands Screen.....	4-8
Version Screen.....	4-10
Reset Command.....	4-11
Devices Screen.....	4-11
Device Modify Screen.....	4-13
Names Screen.....	4-15
Menu Screen.....	4-17
Scan Screen.....	4-18
Flag Screen.....	4-22
Security Screen.....	4-24
Broadcast Screen.....	4-27
Accessing the OSD at a Secondary Console Switch.....	4-30
Switching Between Computers.....	4-31
Performing a Soft Switch.....	4-32
Performing a Screen Capture.....	4-32

Chapter 5

Using the Simplified OSD

Launching the OSD.....	5-1
Printing a Screen Capture.....	5-1
Simplified OSD Selection Screen.....	5-2
Opening the Simplified OSD or	
Accessing the Simplified OSD Selection Screen on a Primary Console Switch.....	5-2
Simplified OSD Status Port Symbols.....	5-3
Simplified OSD Advanced Menus Screen.....	5-3
Opening the Simplified OSD Advanced Menus.....	5-3
Exiting the Simplified OSD.....	5-4
Selecting Computers.....	5-4
Switching Computers.....	5-5
Assigning Unique Names to Computers.....	5-5
Changing Menu Attributes.....	5-7
Effects of Settings on Screen Appearance.....	5-8

Changing Status Flag Attributes	5-10
Values and Effects of Settings on Flag Appearance.....	5-11
Scanning the Computers	5-12
Placing the Switch in Scan Mode	5-12
Canceling Scan Mode	5-12
Setting a Custom Scan Pattern.....	5-12
Removing a Computer from the Scan List	5-13
Securing Server Access.....	5-14
Locking the Screen and Keyboard.....	5-15
Turning off the Screen Saver	5-17
Blanking the Monitor without Locking the Console	5-17
Displaying Version Information.....	5-18
Saving the Hardware Settings	5-19
Resetting the Mouse and Keyboard	5-19
Assigning Specific Device Types	5-20
Switching Tiered Systems.....	5-21

Appendix A

Regulatory Compliance Notices

Regulatory Compliance Identification Numbers.....	A-1
Federal Communications Commission Notice.....	A-2
Class A Equipment	A-2
Class B Equipment	A-3
Declaration of Conformity for Products Marked with the FCC Logo, United States Only	A-3
Modifications	A-4
Cables	A-4
Canadian Notice (Avis Canadien).....	A-4
Class A Equipment	A-4
Class B Equipment	A-5
European Union Notice.....	A-5
Japanese Notice.....	A-6
Taiwanese Notice	A-6

Appendix B

Electrostatic Discharge

Grounding Methods B-2

Appendix C

Power Cord Set Requirements

General Requirements..... C-1

Country-Specific Requirements..... C-2

Appendix D

Specifications

Appendix E

Troubleshooting

Appendix F

Updating Firmware

Index

About This Guide

This guide provides step-by-step instructions for installation and reference information for operation, troubleshooting, and future upgrades for the Compaq Server Console Switch.

Important Safety Information

Before installing this product, read the *Important Safety Information* document provided.

Symbols on Equipment

The following symbols may be placed on equipment to indicate the presence of potentially hazardous conditions:



WARNING: This symbol, in conjunction with any of the following symbols, indicates the presence of a potential hazard. The potential for injury exists if warnings are not observed. Consult your documentation for specific details.



This symbol indicates the presence of hazardous energy circuits or electric shock hazards. Refer all servicing to qualified personnel.

WARNING: To reduce the risk of injury from electric shock hazards, do not open this enclosure. Refer all maintenance, upgrades, and servicing to qualified personnel.



This symbol indicates the presence of electric shock hazards. The area contains no user or field serviceable parts. Do not open for any reason.

WARNING: To reduce the risk of injury from electric shock hazards, do not open this enclosure.



This symbol on an RJ-45 receptacle indicates a network interface connection.

WARNING: To reduce the risk of electric shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into this receptacle.



This symbol indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists.

WARNING: To reduce the risk of injury from a hot component, allow the surface to cool before touching.



These symbols, on power supplies or systems, indicate that the equipment is supplied by multiple sources of power.

WARNING: To reduce the risk of injury from electric shock, remove all power cords to completely disconnect power from the system.



Weight in kg
Weight in lb

This symbol indicates that the component exceeds the recommended weight for one individual to handle safely.

WARNING: To reduce the risk of personal injury or damage to the equipment, observe local occupational health and safety requirements and guidelines for manual material handling.

Rack Stability



WARNING: To reduce the risk of personal injury or damage to the equipment, be sure that:

- The leveling jacks are extended to the floor.
 - The full weight of the rack rests on the leveling jacks.
 - The stabilizing feet are attached to the rack if it is a single-rack installation.
 - The racks are coupled together in multiple-rack installations.
 - Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.
-

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Text Conventions

This document uses the following conventions:

- *Italic type* is used for complete titles of published guides or variables. Variables include information that varies in system output, in command lines, and in command parameters in text.
- **Bold type** is used for emphasis, for onscreen interface components (window titles, menu names and selections, button and icon names, and so on), and for keyboard keys.
- `Monospace typeface` is used for command lines, code examples, screen displays, error messages, and user input.
- Sans serif typeface is used for uniform resource locators (URLs).

Getting Help

If you have a problem and have exhausted the information in this guide, you can get further information and other help in the following locations.

Compaq Technical Support

In North America, call the Compaq Technical Support Phone Center at 1-800-OK-COMPAQ. This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored. Outside North America, call the nearest Compaq Technical Support Phone Center. Telephone numbers for worldwide Technical Support Centers are listed on the Compaq website, www.compaq.com.

Be sure to have the following information available before you call Compaq:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Applicable error messages

- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

Compaq Website

The Compaq website has information on this product as well as the latest drivers and flash ROM images. You can access the Compaq website at www.compaq.com.

Compaq Authorized Reseller

For the name of your nearest Compaq authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the Compaq website for locations and telephone numbers.

Reader's Comments

Compaq welcomes your comments on this guide. Please send your comments and suggestions by email to ServerDocumentation@compaq.com.

Introduction

Product Overview

The Compaq Server Console Switch enables the user to control large computer networks using a single keyboard, video, and mouse (KVM). With a single video screen, the user can select as many as 64 computers running different operating systems.

The 4-Port and 8-Port console switches use an On-Screen Display (OSD) interface, which has menus for accessing each attached computer. Computers can be identified by name or number, enabling the user to view and select server names.

NOTE: The 2-Port console switch uses a simplified OSD.

A typical Compaq Server Console Switch, also known as a KVM configuration, consists of the console, the switch unit, and the attached computers. The user can choose from a single-user system, multiple user system, or a tiered system. Tiering increases computer access from 4 to 8 computers to as many as 64 by adding additional Server Console Switches to the primary console switch, allowing the user to modify the system, as network system needs change.

Two 8-Port console switch units offer dual console capabilities, allowing console switch configurations to be controlled from more than one location or by more than one user.

To switch between computers, simply enter a command at the keyboard. The selected computer receives characters entered at the keyboard and displays its video output on the monitor. The user can also use the mouse to interact with the graphic interface of the selected computer.

The Compaq Server Console Switch family of products is available in 2-, 4-, and 8-Port versions and can be used in various configurations to accommodate large or small systems. All versions are packaged in space-efficient 1U height (1.71-inch) cases.

This chapter provides an overview of the Server Console Switch features, functionality, and sample configurations.

Features

Use the Server Console Switch in various configurations to connect from 2 to 64 servers.

The features of the Server Console Switch include:

- **On-Screen Display (OSD)**—Displays system-related information on the monitor, such as power-up test data and configuration menus.
- **Programmable Scanning**—Evaluates system performance by sequentially scanning any or all of the computers in the system. Programmable scanning allows you to determine which computers to include as well as the duration of the connection.
- **Configuration NVRAM**—Makes it easy to set configuration information using commands entered from the keyboard. The non-volatile RAM (NVRAM) stores the resulting configuration until you decide to change the information, even if the unit loses power.
- **Hardware Reset Switch**—Resets the unit without interrupting power to the system if the keyboard or mouse communication is disrupted.
- **Password Protection**—Protects against unauthorized users by providing a password option for security purposes.

- **Switch Firmware Update**—Allows quick and easy update since the application code of the switch resides in FLASH. The port communications settings are automatically configured to allow direct downloading from the connected computer.
- **Alternate Language Selection**—Provides alternate languages, available on the Compaq Server Console Switch Software Utility CD. (Not available for use with the 2-Port switch.) See this CD for additional information.
- **Support for Optional Switch Box Connector Kit**—Provides frontal access to the 4- and 8-Port console switches for a keyboard, monitor, mouse, and power cord.

Configurations

There are many ways to configure the Server Console Switch to meet specific organizational needs. Additional information on configuring multiple Server Console Switches can be found in Chapter 3.

- A single console switch box is used to connect four or eight servers. In this configuration, the KVM are connected directly to the unit by their respective cables. The user can connect the Server Console Switch to servers located in the same or adjoining racks.

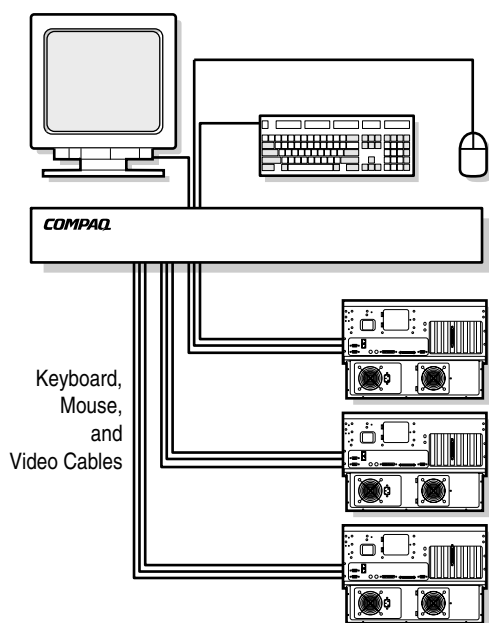


Figure 1-1: Single 4-Port unit

- The user can tier multiple Server Console Switch units to connect up to 64 servers. This configuration is illustrated in Figure 1-3, where the device port from the secondary unit is connected to one of the computer ports on the original, or primary unit. Multiple Server Console Switch units can be tiered from the primary unit.

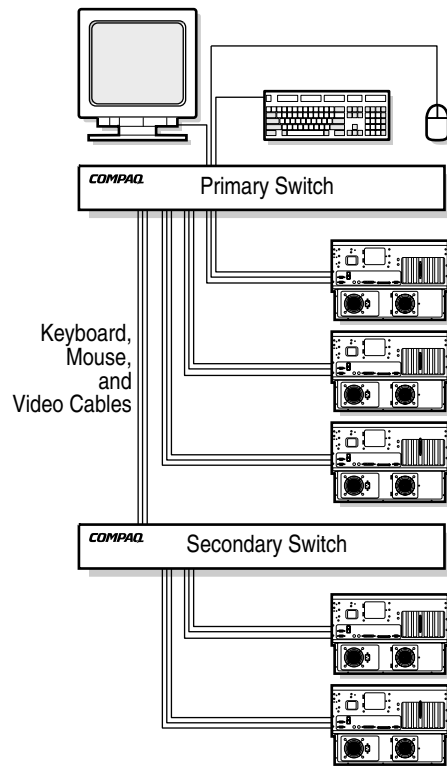


Figure 1-2: Tiered configuration

- The Dual Console 8-Port models allow the user to set up two consoles, so that the console switch system can be controlled from more than one location, or by two users.

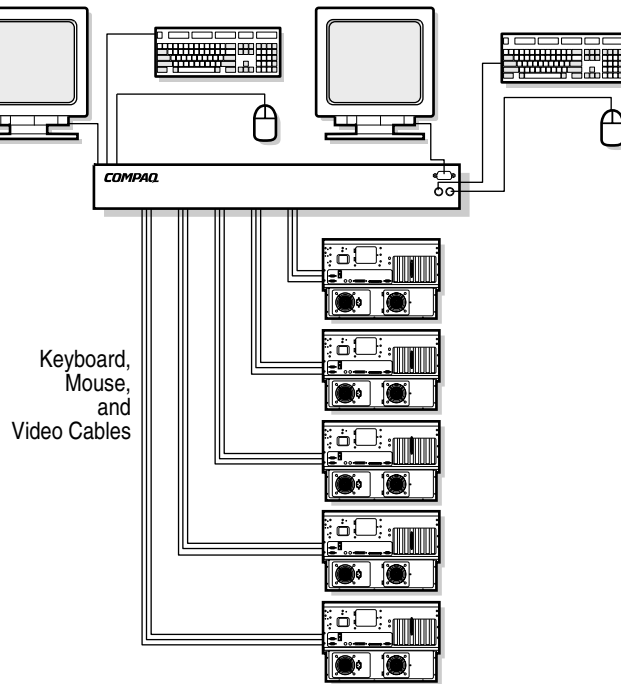


Figure 1-3: Dual console configuration

Available Models

The Server Console Switch is available in 2-, 4-, and 8-Port versions.

Table 1-1: Model Comparison Chart

	2-Port	4-Port	8-Port	Dual Console 8-Port	Dual Console 8-Port DC
Number of computer ports	2	4	8	8	8
Number of consoles (monitor, keyboard, mouse)	1	1	1	2	2
Number of tiered computers	N/A	32	64	64	64
Switch connection mode control	No	No	No	Yes	Yes
Power Supply	110/220VAC	110/220VAC	110/220VAC	110/220VAC	48V DC

Hardware Installation

The following section outlines the procedures for installing the Server Console Switch hardware.

Installation Checklist

Before installing the Server Console Switch, refer to the following list to be sure that all of the listed components were received.

Kit Contents

- Compaq Server Console Switch Rack Option Kit
- Main console switch
- Power cord (except Dual Console 8-Port DC model)
- Rails with hardware
- *Compaq Server Console Switch User Guide*
- Serial cable
- Warranty card

You must supply:

- Interconnecting cables for KVM (included in 2-Port Rack Option Kit)
- KVM for each user console

Required Tools

You need a Phillips screwdriver.

Installing the Hardware

2-Port Side-Mount 0U Installation

NOTE: The 2-Port unit should only be installed using the following side-mount procedure.

To side-mount the 2-Port unit:

1. Attach the side-mount brackets to the console switch, using two screws on each side.

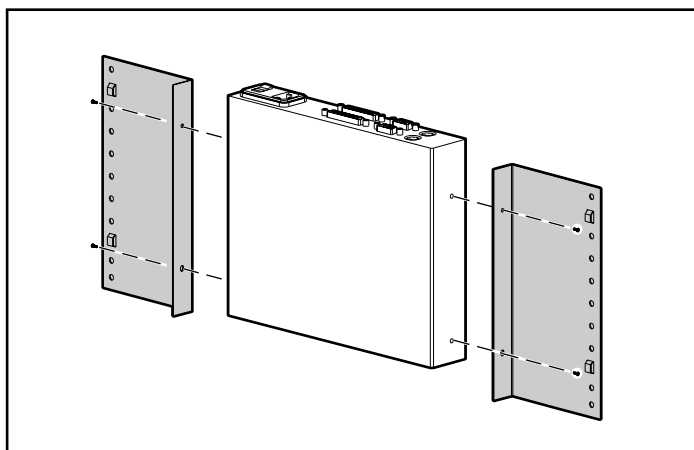


Figure 2-1: Attaching the side-mounting brackets

2. Slide the tabs on the side-mounting brackets into the same U location on each side of the rack.

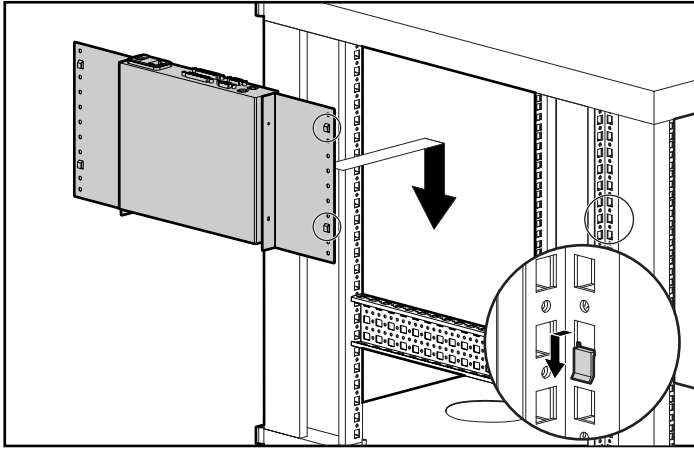


Figure 2-2: Mounting the console switch to the side of the rack

3. Secure the console switch to the rack frame, using one screw on each side.

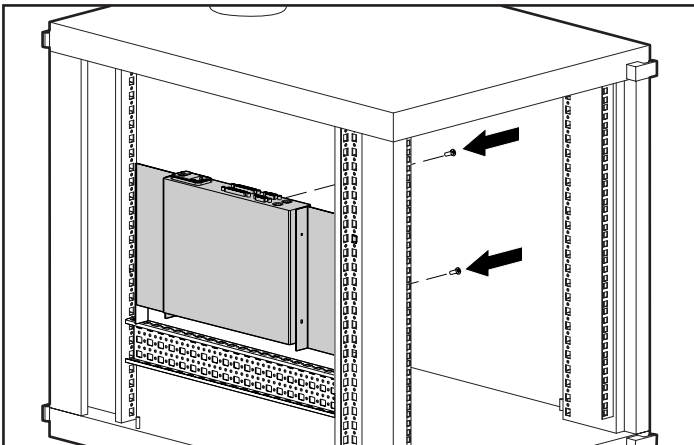


Figure 2-3: Securing the console switch to the rack

Connecting 2-Port KVM Cables

To connect the 2-Port KVM cables refer to Figure 2-4.

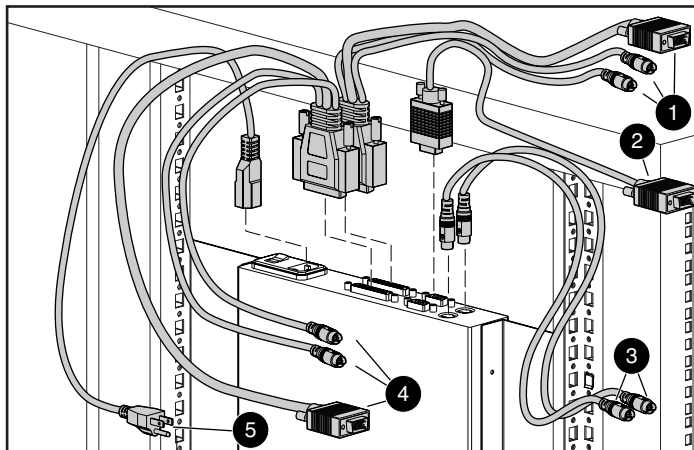


Figure 2-4: Connecting the 2-Port KVM cable

Item	Description
1	Keyboard, monitor, and mouse connectors to computer 1
2	Monitor connector to switch box console
3	Keyboard and mouse connectors to the console switch
4	Keyboard, monitor, and mouse connectors to computer 2
5	Power cord

Side-Mount 0U Installation

Use the following procedure to install the 4-Port, 8-Port, or Dual Console 8-Port unit on the side of a rack.

Type A

To side-mount the console switch:

1. Attach the side-mount brackets to the console switch, using two screws on each side.

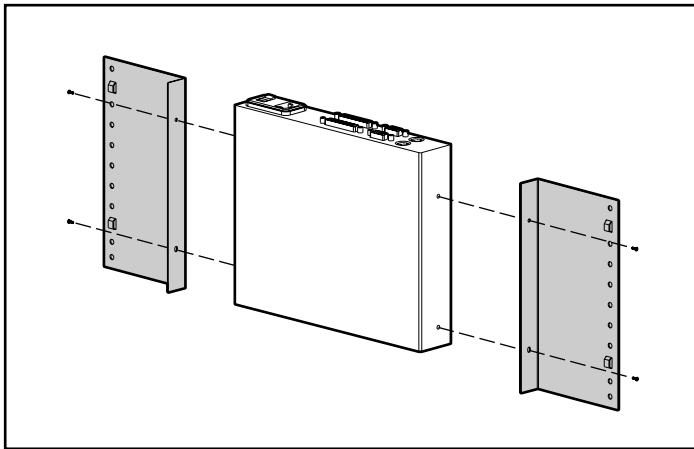


Figure 2-5: Attaching the side-mounting brackets

2. Slide the tabs on the side-mounting brackets into the same U location on each side of the rack.

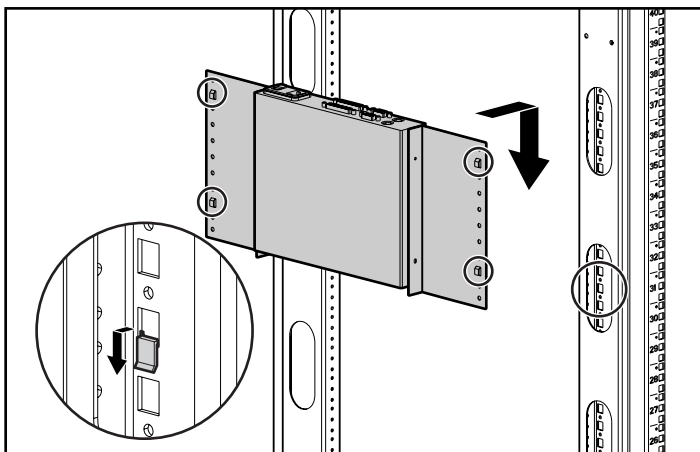


Figure 2-6: Mounting the console switch to the side of the rack

3. Secure the console switch to the rack frame, using two screws on each side.

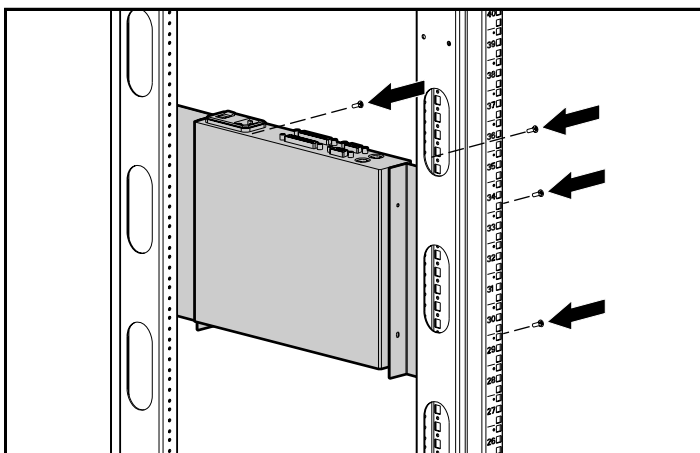


Figure 2-7: Securing the console switch to the rack

Type B

1. Attach the side-mounting brackets to the console switch, using two screws on each side.
2. Slide the tabs on the side-mounting brackets into the same U location on each side of the rack.

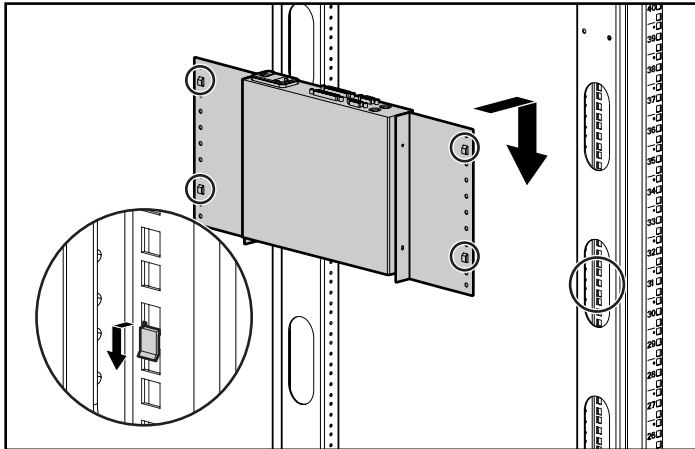


Figure 2-8: Mounting the console switch to the side of the rack

3. Insert four cage nuts into the rack frame where the side-mounting bracket holes are located.

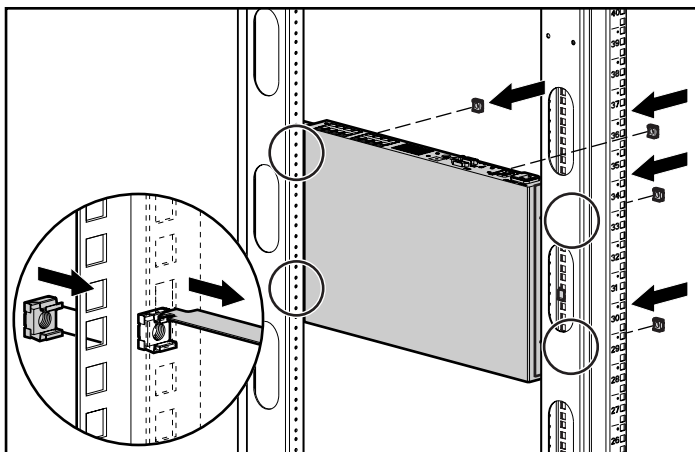


Figure 2-9: Inserting cage nuts

4. Secure the console switch to the rack frame, using two screws on each side.

Rear Rack Installation

IMPORTANT: If you are installing a console switch with a 1U component, such as the 1U Keyboard Drawer Rack Option Kit, additional rack space is not required, making it a 0U installation.

To install the console switch in the rear of the rack:

1. Attach the slide rail brackets to the console switch, using two screws on each slide.

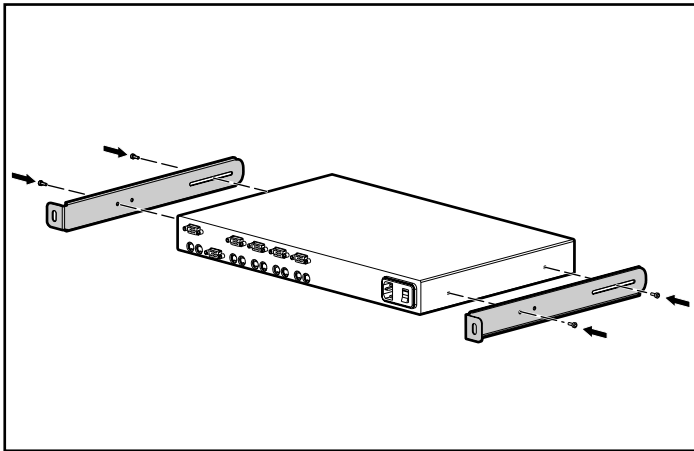


Figure 2-10: Attaching the slide rail brackets

2. Be sure that a cage nut has been installed behind the rear rail.
3. Slide the console switch with the slide rail brackets into the rail-mounting brackets already installed in the rack.

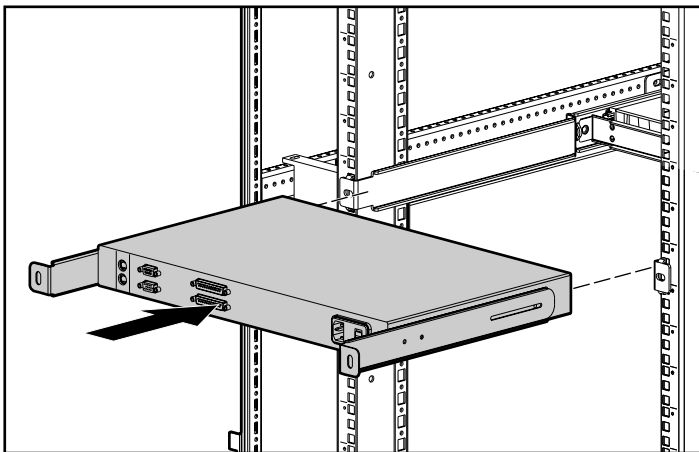


Figure 2-11: Sliding the console switch into the rack

4. Secure the slide rail brackets to the rear of the rack, using one screw on each side.

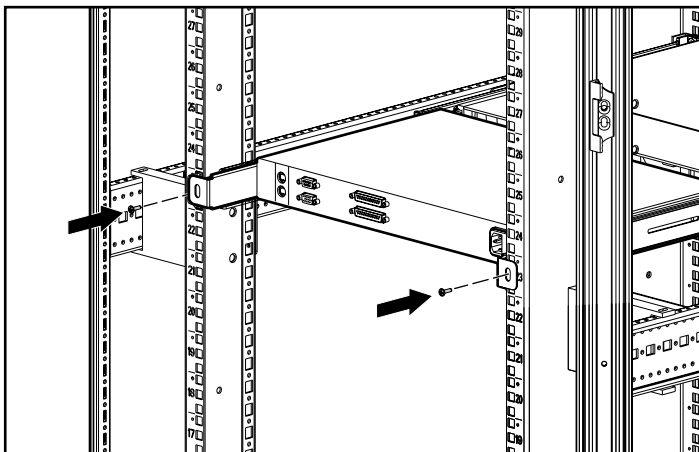


Figure 2-12: Securing the slide rail brackets to the rack

Standard 1U Installation

To install the console switch:

1. Attach the slide rail brackets to the console switch, using the two screws on each side.
2. Use the template that was shipped with the component to mark the location of the mounting hardware.
 - a. Push back the tabs (marked ☆) on the top of the template and place them in the correct holes in the mounting rails.
 - b. Match up the hole pattern indicated on the sides of the template with the hole pattern on the mounting rails.
 - c. Measuring from the top of the component immediately below the new component, place the template against the front and rear of the rack frame to mark the attachment points for the mounting rails and rear cage nuts.

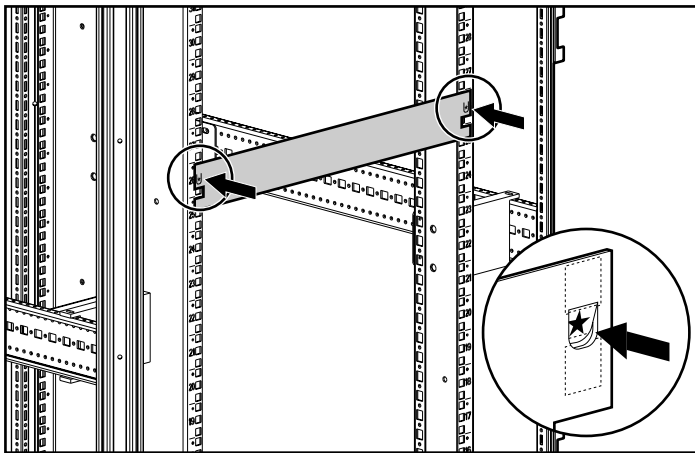


Figure 2-13: Measuring with the rack template

3. Install two cage nuts into the holes marked by the template at the rear of the rack.

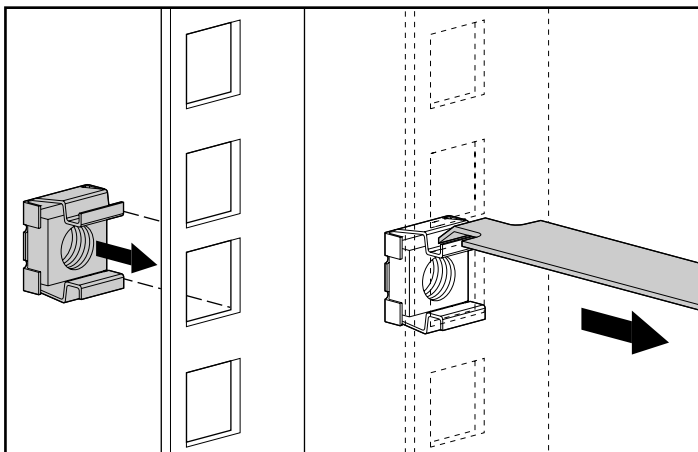


Figure 2-14: Installing cage nuts

4. Loosely attach the wing nuts (1) and extend the adjustable rail-mounting brackets to the desired length (2).
5. Tighten the wing nuts slightly to stabilize the adjustable rails during installation.

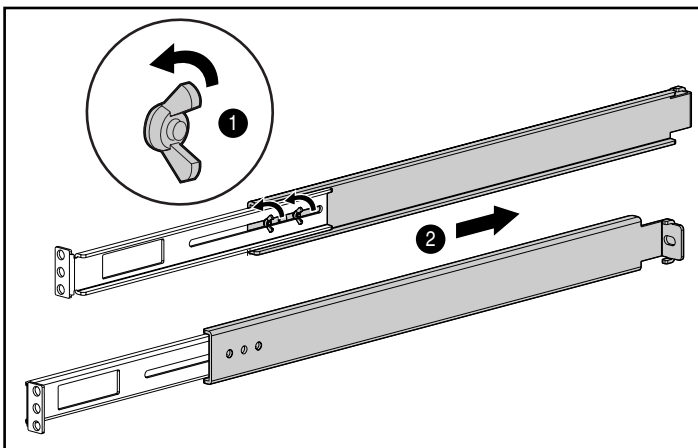


Figure 2-15: Adjusting rails

6. Insert an adjustable rail into the rack and hook the tabs into the appropriate holes at the rear of the rack, aligning the screws holes at the front of the rack.
7. Secure the rear of the adjustable rail, using one screw for each cage nut previously installed.

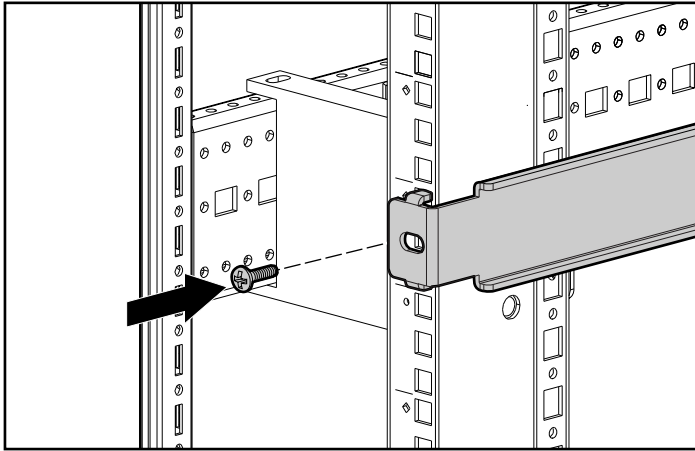


Figure 2-16: Securing the adjustable rail

8. Secure the front of the adjustable rail to the rack, using two screws for each rail.

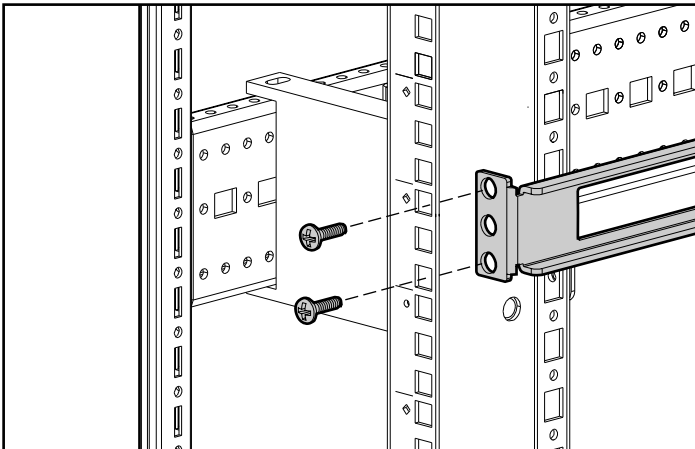


Figure 2-17: Securing the adjustable rail

9. Slide the console switch into the adjustable rails and secure it to the rear of the rack, using one screw on each side.

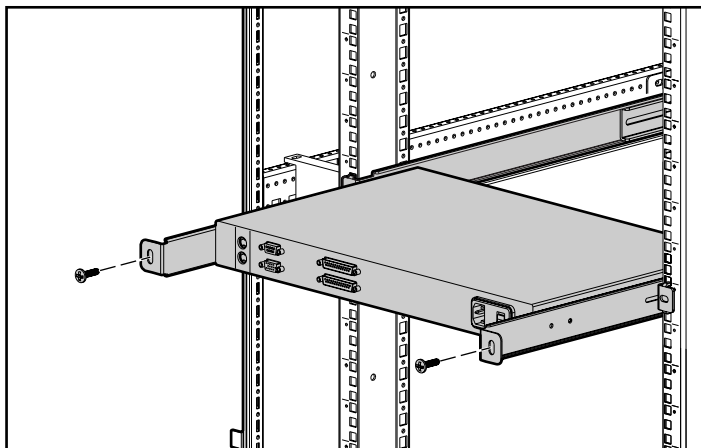


Figure 2-18: Securing the console switch to the rack

10. Position the front cover panel and secure it to the front of the rack, using one screw on each side.

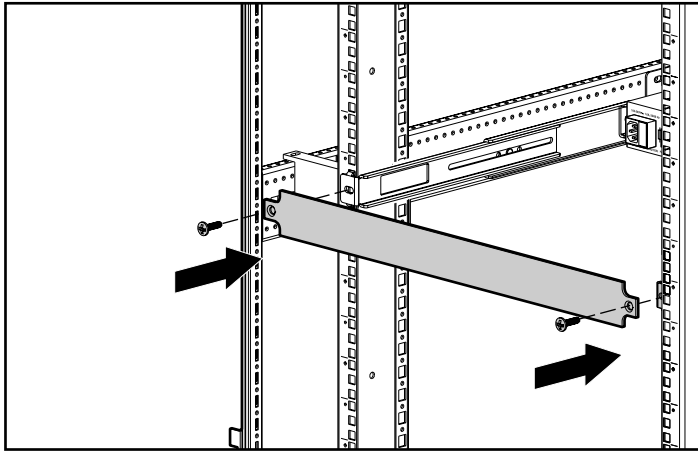


Figure 2-19: Positioning the front cover panel

NOTE: This installation supports the optional Switch Box Connector Kit, which provides frontal access to a 4- or 8-Port switch for a keyboard, monitor, mouse, and power cord. If desired, use this option in place of the front cover panel.

Completing the Installation

After your Server Console Switch is installed in the rack using one of the methods listed in this chapter, proceed to Chapter 3, “Cabling.”

Cable Information

Cable length affects video quality as well as keyboard and mouse data timing. The maximum cable length is determined in part by the computer and peripherals used. Not all systems give satisfactory results at the maximum length.

Cable Locking Mechanism

The keyboard and mouse cable options for the 4-Port, 8-Port, and Dual Console 8-Port units have a locking mechanism to provide a secure connection. You must use proper procedures when disconnecting these cables.



CAUTION: Failure to follow proper disconnect procedures could result in damage to the cable or the unit.

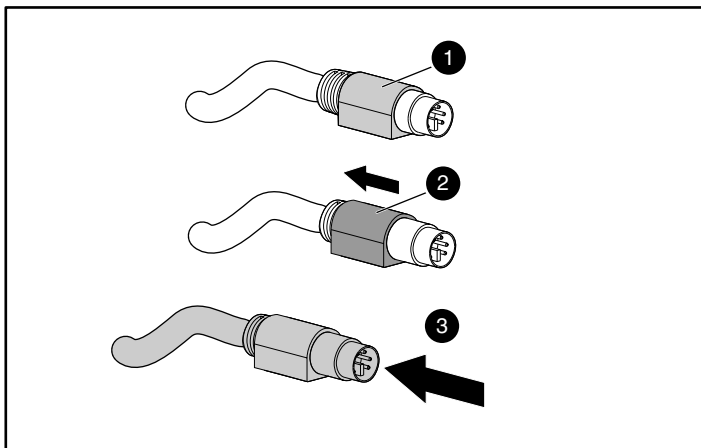


Figure 3-1: Disconnecting the keyboard or mouse cable

To disconnect the keyboard or mouse cable properly:

1. Grasp the housing (1).
2. Slide it back to release the locking mechanism (2).
3. Remove the cable (3).

To insert the cable, plug it into the appropriate connector. The locking mechanism automatically locks the cable in place.

Connect the cables to the switch in this order:

1. Mouse
2. Monitor
3. Keyboard

This cable connection sequence is particularly important later when installing new devices to the system. The user can connect a mouse and/or keyboard to the switch when the system is running. When connecting the new device, the console switch recognizes the device and configures it to the settings of the currently selected computer. This allows the user to replace failed devices without having to restart the system.

When making changes to the switch system, the user should save the hardware configuration settings. If the settings are not saved, they are lost when power is lost or turned off. To re-establish keyboard and mouse communication to the switch, the user might have to reboot each computer. To save the hardware settings, click **Snapshot** on the **Commands** screen. Refer to Chapter 4 for additional information on using the OSD.

Connecting the Cables



WARNING: To reduce the risk of electric shock or damage to your equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
 - Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times.
 - Disconnect the power from the unit by unplugging the power cord from either the electrical outlet or the unit.
-

To connect the cables:

1. Connect the KVM cables to the appropriate console switch connectors. Note that all keyboard and mouse cables are 6-pin mini-DIN PS/2 style, and all the video cables are 15-pin VGA/SVGA style. (These connectors are located on the left rear of each of the console switches, with additional connectors on the front for the Dual Console 8-Port console switches.)

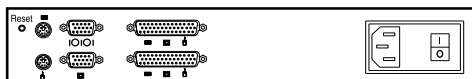


Figure 3-2: 2-Port connectors

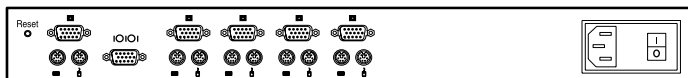


Figure 3-3: 4-Port connectors

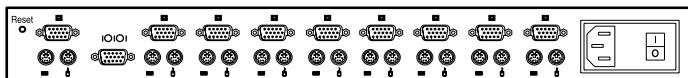


Figure 3-4: 8-Port connectors



Figure 3-5: Dual Console 8-Port AC connectors

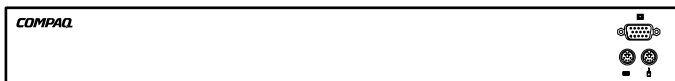


Figure 3-6: Dual Console 8-Port DC connectors

2. Decide which computer is to be connected to port 1.
 - a. Connect the appropriate connector beneath the port labeled 1 to the mouse.
 - b. Connect the 15-pin VGA connector to the monitor.
 - c. Connect the appropriate connector to the keyboard.
 - d. Bundle and label the cables for easy identification.
3. Repeat step 2 for all remaining computers to be connected to the switch box.



WARNING: To reduce the risk of electric shock or damage to the equipment, do not disable the power cord grounding feature. This equipment is designed to be connected to a grounded (earthed) power outlet that is easily accessible to the operator. The grounding plug is an important safety feature.

4. Connect the power cord to the console switch.

Connecting the Power Cable to the Dual Console 8-Port DC Switch Box

Use only #18 AWG stranded wire UL 1007 or UL 1015 (not included with the console switch). The maximum length should not exceed 10 meters (32.8 feet).



WARNING: Always disconnect power before changing any wiring.



WARNING: To reduce the risk of electric shock or damage to the equipment this product must be installed in accordance with the following guidelines:

- This product is intended to be connected to a DC power source that can be classified as a secondary circuit in accordance with applicable national requirements for Information Technology Equipment. Generally, these requirements are based on the International Standard for Safety for Information Technology Equipment, IEC 950. The source must have one pole (Neutral/Return) referenced to earth ground in accordance with local/regional electric codes and/or regulations.
 - This product is intended to be installed only in areas that comply with ETSI-300-132-2.
 - This product must be connected to a power distribution device that provides a means for disconnecting power from the branch supply circuit. The power distribution device must be provided with an overcurrent protective device suitable for interrupting fault currents available from the main source, and rated no more than 0.3 A at the distribution device. The green/yellow lead of the power cable assembly must be connected to a suitable ground/earth terminal on the power distribution unit. Do not rely on the rack or cabinet chassis to provide adequate ground/earth continuity.
-

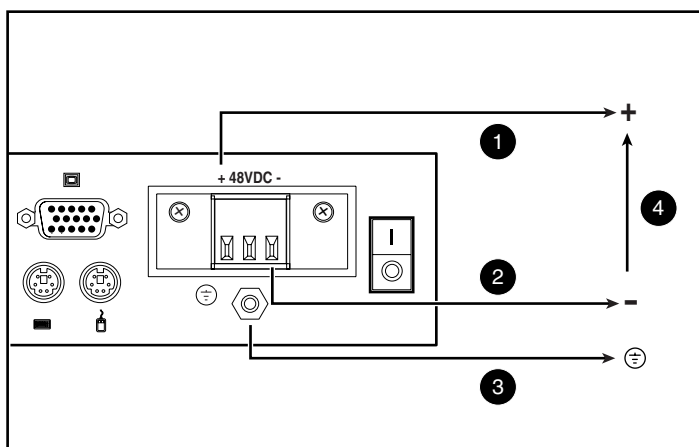


Figure 3-7: Wiring diagram

Item	Description
1	Red wire
2	Black wire
3	Green/Yellow striped wire*
4	48 V DC (to external fused 48 V DC supply)

* Use chassis ground connection only.

1. Plug connector (1) into receptacle. Do not use ground connection through connector.
2. Insert stripped wires (2) and tighten screws (3).

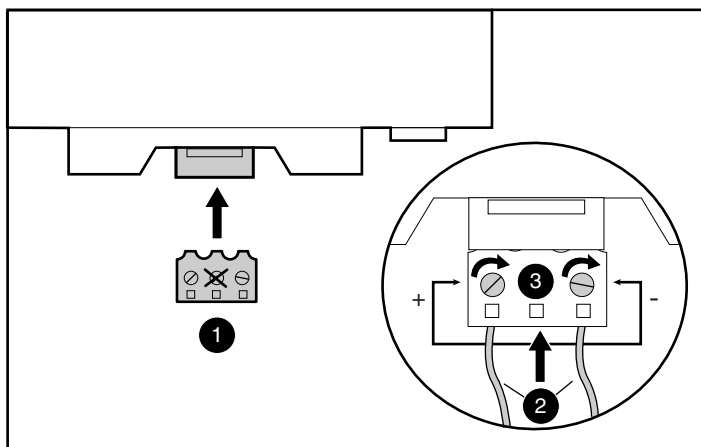


Figure 3-8: Connecting the wires

Switch Box Startup Behavior

It is important to turn on the console switch before turning on the computers because when the servers boot up, their drivers send device settings to the console switch. During startup, the console switch does the following:

- Identifies the mouse and keyboard and puts them into default states.
- Switches to port 1 by default, and displays the number “1” in the status flag displayed on the monitor. If the status flag default setting has been changed to Names mode, the status flag displays the port name instead of the port number. If a status flag is not shown on the monitor, make sure the computer is connected and powered up.

Power up the system as follows:

1. Press the power switch located on the rear panel of the console switch to the on position.
2. Power on the computers.

Computer Startup Behavior

During startup, the computers send device settings to the console switch. The unit then generates standard responses to these commands and allows the computers to boot successfully without being physically connected to the keyboard, monitor, or mouse. After the console switch is installed, the user can save these settings to non-volatile RAM (NVRAM). Refer to Chapter 4 for additional information.

Configuring the Console Switch

When the user first turns on the switch box, no configuration is needed for basic switching operation. To configure the unit to meet specific needs, such as assigning unique names for the computers or displaying the computers by their assigned names or port numbers, refer to Chapter 4.

Unattended Reboot

After a power outage, each server connected to the console switch reboots (if configured to do so) without operator intervention, when power returns. The console switch generates responses to ensure that the reboot is successful and that it is ready to switch between computers.

Resetting the Unit

If the keyboard or mouse locks up, press the Reset button on the back panel to reset the console switch. Pressing the Reset button allows the user to recover the device settings without power cycling the computers.

Making Connections Under Power

The user can connect additional computers to the console switch while it is powered up. When powering the newly connected computers, the console switch recognizes them, and the user can switch to the new computers without taking any additional steps.

The user can also connect the mouse and/or keyboard to the console switch while the system is powered up. When connecting a new device, the console switch recognizes it and configures it to the settings of the currently selected computer. This technique allows failed devices to be replaced without having to restart the system.

NOTE: When new computers are added to the console switch, or when existing connections are changed, the new configurations should be saved in NVRAM by using the Snapshot option from the OSD.

Alternate Configurations

There are other ways to configure the system, including tiered console switch configurations and dual console configurations.

Tiered Switch Configurations

In tiered systems, the user can connect additional console switches to ports on a primary unit. That is, console switches can be tiered in primary/secondary configurations to allow one primary console switch to switch between computers or other console switch units. Tiering involves linking the physical keyboard, mouse, and monitor of the secondary units to computer ports on the primary unit. For example, one 8-Port primary unit can accommodate eight secondary console switch units. A system with eight servers connected to each of the eight secondary console switches would provide a 1x64 concentration.

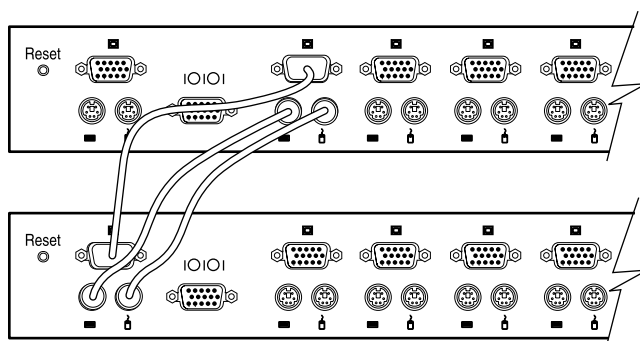


Figure 3-9: Tiered configuration

When connecting a secondary unit to one of the ports of the master unit, the user must indicate this connection to the primary unit by performing the “Assigning Specific Device Types” procedure described in Chapter 5. This involves entering a secondary unit designation for the associated port number instead of a monitor type. Use the designation **4-Port** for a 4-port secondary and **8-Port** for an 8-port secondary.

The OSD allows secondary ports to be treated much like ports on the primary console switch. It may be helpful to name each secondary unit as described in “Assigning Unique Names to Computers” in Chapter 5.

Connecting Tiers while the System is Powered Up

If necessary, you can connect a primary unit to a secondary unit while the system is powered up. This technique can be used to isolate any problems with minimum disruption to the system. When plugging a primary console switch into a secondary unit, first connect the mouse and video cables, and then connect the keyboard cable. This is important because the primary unit interprets the keyboard connection as the secondary unit's power up. At this point, the primary unit sends initialization codes to the secondary unit, triggering device configuration.

Refer to Chapter 4 for information on switching tiered systems.

Dual Console Configuration

The dual console configuration is available using either of the Dual Console 8-Port console switches. Use the same methods described previously to connect the cables to the unit. Then use the ports on the front of the console switch to connect an additional KVM. Refer to “Menu Screen” in Chapter 4 for information on switching connection modes.

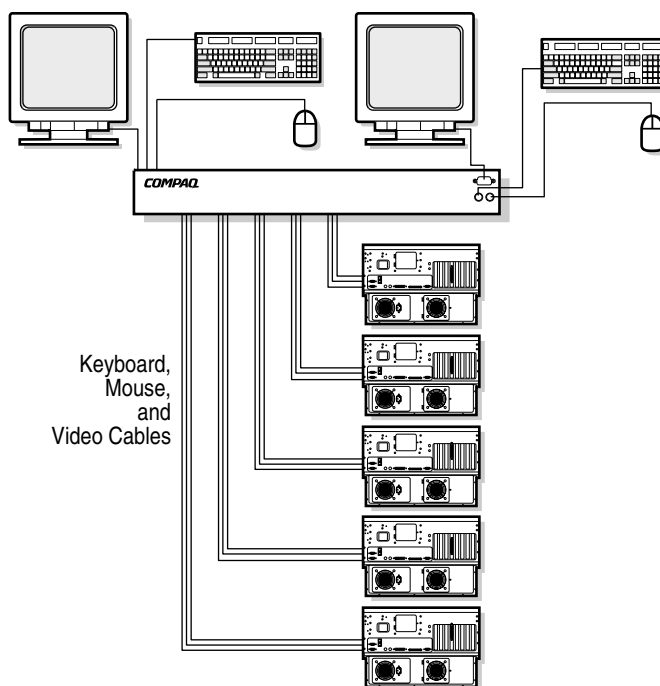


Figure 3-10: 8-Port dual console configuration

Using the OSD

On-Screen Display

The On-Screen Display (OSD) is used with the 4-Port, 8-Port, and Dual Console 8-Port units. If a 2-Port console switch is being used, refer to Chapter 5, “Using the Simplified OSD.”

Alternate Languages

The Compaq Server Console Switch Software Utility CD contains an update to the OSD for languages other than English. Refer to the CD for information on using this utility.

NOTE: Language selection is not available on the 2-Port console switch.

Functions

Use the OSD to perform the following basic functions:

- Assign device types if secondary console switches are attached to a primary console switch (tiering)
- Assign unique names to computers
- Choose switch connection mode if using the Dual Console 8-Port console switch

- Save the hardware settings
- View information about the console switch system

Additional functionality is described in this chapter under each of the screen headings.

NOTE: The OSD operates independently of the computer operating system.

Navigation





The user can navigate the OSD menus and enter commands using the mouse and keyboard; however, because the console switch operates independently of the computer operating systems, OSD keyboard and mouse conventions may differ from those used when controlling the selected computer. Table 4-1 lists the special conventions used while navigating the OSD.

Table 4-1: Conventions for Navigating OSD Menus

Item	Function
Mouse	
Left mouse button	Activates commands, highlights line items, and repositions OSD menus on the desktop (click and drag the title bar).
Right mouse button	Closes the current screen and returns to the previous. Exits OSD from the Main screen.

continued

Table 4-1: Conventions for Navigating OSD Menus *continued*

Item	Function
Keyboard	
Print Scrn	Opens the OSD Selection screen.*
Page Up/Page Down	Pages up and down through the name and port lists.
Enter	Completes switch operation on the Main screen and exits OSD menus.
Caps Lock	Disables OSD. (Use the Shift key to change case.)
Esc	Closes the current screen and returns to the previous. Exits OSD from the Main screen.
Alt	When used in combination with underlined letter, opens menus or executes actions.
Alt + X	Closes the current screen.
F1	Opens online help.
Screen	
	Pages up and down through the name and port lists.
	Closes the current screen and returns to the previous screen without changing settings.
	Opens Online Help for each screen.
	Accepts changes, closes the current screen, and returns to the previous screen.
* To print a screen, refer to “Performing a Screen Capture” in this chapter.	

When the OSD is activated by pressing the **Print Scrn** key, use the mouse instead of the arrow keys to highlight menu options.

Menu Overview

The following table displays the options available from each OSD menu.

Table 4-2: OSD Menu Tree

Main Menu	
Setup	Commands
Scan	Scan Enabled
Menu	Broadcast Active
Flag	Snapshot
Set Flag Position	Reset
Security	Version
Broadcast	
Devices	
Modify	
Names	

OSD Main Screen

Press the **Print Scrn** key to open the OSD menus. The OSD **Main** screen is displayed first.

The **Main** screen lists all of the ports in the system, the associated computer names, and the status of each port. If a Dual Console 8-Port console switch is being used, an **A** or **B** next to the status symbol identifies the console switch.

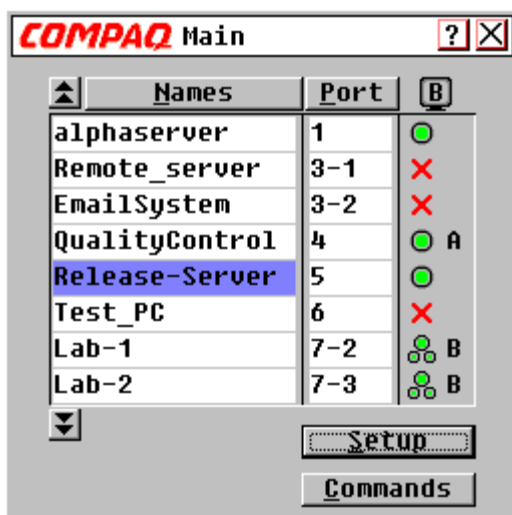







Figure 4-1: Main Screen Functions

Button	Function	Alternate Method
Names	Sorts alphabetically by names	Press the Alt + N key.
Port	Sorts by port numbers	Press the Alt + P key.
Setup	Displays Setup screen	Press the Alt + S key.
Commands	Displays Commands screen	Press the Alt + C key.
NOTE: Highlighted port indicates selected device.		

Primary ports have a single port number. Secondary ports have the port number of the primary console switch they are attached to followed by a dash, and then the number of the secondary port.

Table 4-3: OSD Symbols

Symbol	Description
	Computer is connected and running
	Connected computer is not running or not operating properly
	Tiered console switch is connected and running
	Tiered console switch is not running or not operating properly
	Identifies the user in a Dual Console configuration
A, B	Console identifier in a Dual Console 8-Port console switch

Setup Screen

The **Setup** screen lists menu options to change configurations.

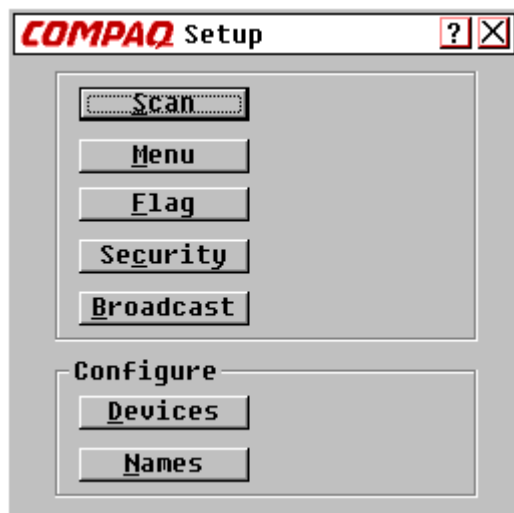


Figure 4-2: Setup screen

Button	Function	Alternate Method
Scan	Sets sequential or customized scan pattern	Press the Alt + S key.
Menu	Sets display order, delay time, and cooperative or preemptive mode	Press the Alt + M key.
Flag	Customizes the flag display	Press the Alt + F key.
Security	Sets a password and screen saver	Press the Alt + C key.
Broadcast	Sets the keyboard and mouse for simultaneous control	Press the Alt + B key.

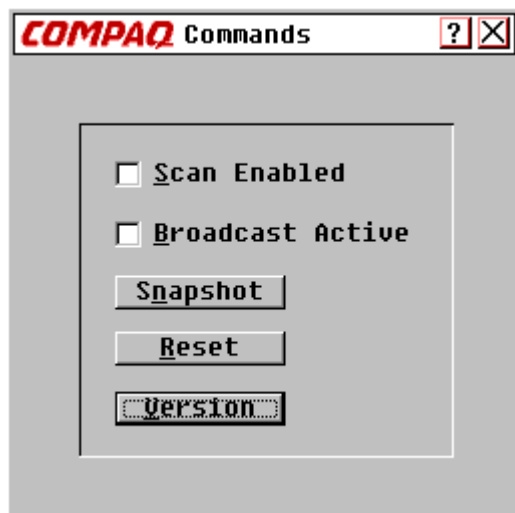
continued

Figure 4-2: Setup screen *continued*

Button	Function	Alternate Method
Devices	Establishes monitor and port settings	Press the Alt + D key.
Names	Assigns names to computers	Press the Alt + N key.

Commands Screen

The **Commands** screen lists actions the user can initiate.

**Figure 4-3: Commands screen functions**

Field/Button	Function	Alternate Method
Scan Enabled	Automatically switches video from port to port	Press the Alt + S key.
*Broadcast Active	Simultaneously controls more than one computer in a single system	Press the Alt + B key.

continued

Figure 4-3: Commands screen functions *continued*

Field/Button	Function	Alternate Method
**Snapshot	Records current keyboard and mouse settings	Press the Alt + N key.
Reset	Returns to mouse and keyboard default settings	Press the Alt + R key.
Version	Views firmware version information	Press the Alt + V key.

* Only one user may select **Broadcast Active** at a time.

** Snapshot saves the mouse and keyboard information the console switch uses to boot up the computers. If the user does not save the hardware settings when installing a console switch system, add or remove computers from the system, or change the mouse, keyboard, or monitor, they are lost when power to the console switch is lost or turned off and each computer must be rebooted.

Version Screen

The user can display the version number of the console switch firmware as well as information about any auxiliary devices connected to the console switch to facilitate system troubleshooting and support.

The **Version** screen also displays specific device information for the currently selected computer. Keyboard information includes enabled/disabled, typematic rate, LED settings, port mode, and keyboard type. Mouse information includes enabled/disabled, sample rate, resolution, and mouse type.

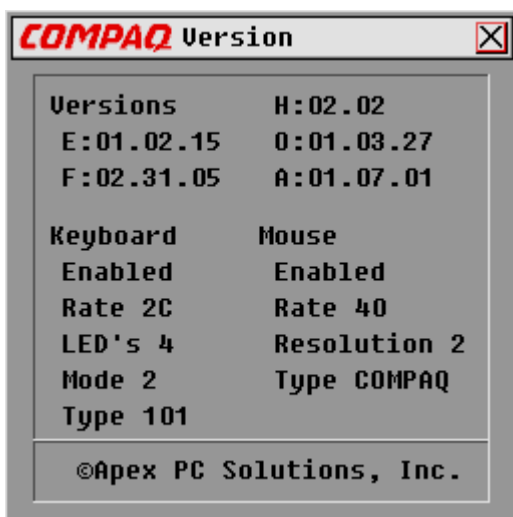


Figure 4-4: Version screen

Reset Command

The console switch stores mouse and keyboard connection and rate data and uses this information to emulate the physical mouse and keyboard. If communication between the console switch and mouse and keyboard fails, the selected server may not function. The **Reset** command takes the mouse and keyboard information that was saved in Snapshot and sends it to the server to re-establish connection with the mouse and keyboard. Resetting the mouse and keyboard attempts to restore the correct settings for the selected computer.

Because the console switch emulates the physical mouse and keyboard, it allows a computer without an attached keyboard or mouse to operate as though there were a physical device attached to it.

To reset the mouse and keyboard values, click **Reset**.

NOTE: If this does not correct the problem, press the Reset button on the back panel of the console switch.

Devices Screen

If the system includes one or more secondary console switches in a tiered configuration, the user must make the primary console switch aware of the secondary console switch by assigning a specific device type. In addition, if one or more of the computers in the console switch system have a special type of monitor, it may be necessary to assign that monitor type to the port associated with that computer.

To modify a device, double-click it or highlight it and then click **Modify**.

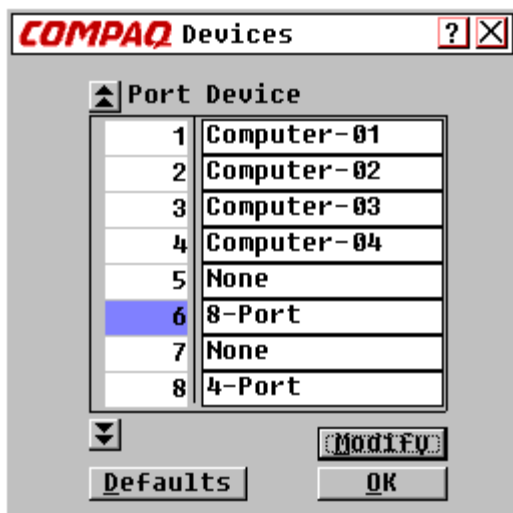


Figure 4-5: Devices screen functions

Button	Function	Alternate Method
Modify	Displays Device Modify screen to modify port settings	Press Alt + M key.
Defaults	Uses the default device type and port settings	Press Alt + D key.
OK	Accepts changes, closes the current screen, and returns to the previous screen	Press Alt + O key.

Note: Highlighted port indicates selected device.

Device Modify Screen

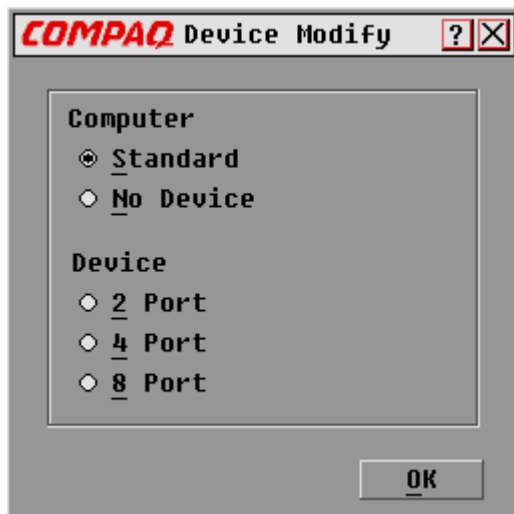


Figure 4-6: Device Modify screen functions

Field/ Button	Function	Alternate Method
Standard	Uses basic computer connection	Press the Alt + S key.
No Device	Deletes this number or name from the list of computers on the Main screen if a console switch or computer is not connected to it	Press the Alt + N key.

continued

Figure 4-6: Device Modify screen functions *continued*

Field/ Button	Function	Alternate Method
2 Port	Assigns a 2-Port console switch as the secondary system	Press the Alt + 2 key.
4 Port	Assigns a 4-Port console switch as the secondary system	Press the Alt + 4 key.
8 Port	Assigns an 8-Port console switch as the secondary system	Press the Alt + 8 key.
OK	Accept changes, closes the current screen, and returns to the previous screen	Press the Alt + O key.

Names Screen

Use this screen to identify a computer by name rather than port number.

NOTE: Before assigning names to computers attached to secondary console switches, the user must first associate the secondary device with a port. After this is done, the port numbering structure is reorganized so that the secondary ports are visible to the user. Refer to the “Devices Screen” and “Device Modify Screen” sections previously in this chapter.

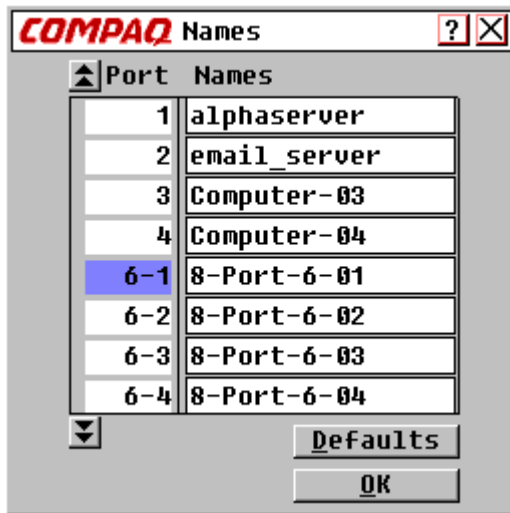


Figure 4-7: Names menu functions

Button	Function	Alternate Method
Defaults	Restores default settings	Press the Alt + D key.
OK	Accepts changes, closes the current screen, and returns to the previous screen	Press the Alt + O key.

Note: Highlighted port indicates selected device.

To assign a unique name to a computer:

1. Click the port number of the computer.
2. Enter the device name in the **Names** field.

Computer names can be up to 15 characters long, including only A–Z upper and lower case, 0–9, and the dash character. Press the **Backspace** key or the **Delete** key to delete an incorrect entry. Click the cursor anywhere on the line to overwrite.

3. Repeat steps 1 and 2 for each computer to be named.
4. Click **OK**.

To edit an existing port or name double-click it, make any changes, then click **OK**.

Menu Screen

Use this screen to set the display order of the computers on the **Main** screen. If a Dual Console 8-Port console switch is being used, use this screen to select a console switch connection mode.

NOTE: **Switch Mode** is grayed out in single-user console switches, and **Cooperative** and **Preemptive** are not selectable.

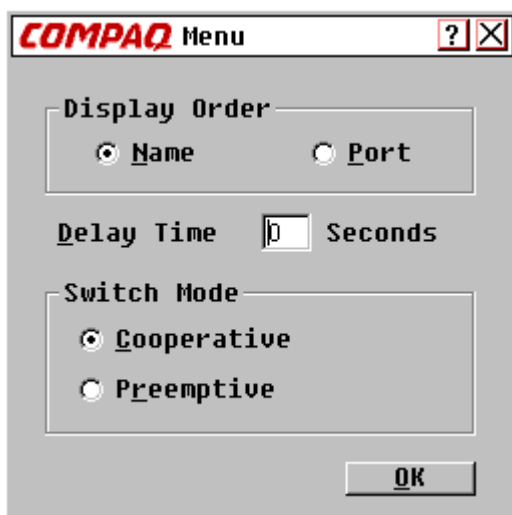


Figure 4-8: Menu screen functions

Field/ Button	Function	Alternate Method
Name	Sorts computer display order by name	Press the Alt + N key.
Port	Sorts computer display order by port number	Press the Alt + P key.

continued

Figure 4-8: Menu screen functions *continued*

Field/ Button	Function	Alternate Method
Delay Time	Enters the number of seconds to delay display to allow soft switch*	Press the Alt + D key.
Cooperative	Has the console switch maintain the current user connection; this user will not be disconnected if another user console requests connection (default setting)	Press the Alt + C key.
Preemptive	Has the console switch allow any user console to select any computer at any time	Press the Alt + R key.
OK	Accepts changes, closes the current screen, and returns to the previous screen	Press the Alt + O key.
* Delay Time allows the user to complete a soft switch without the OSD menus displaying. Refer to "Performing a Soft Switch" in this chapter.		

Scan Screen

In scan mode, the console switch automatically switches from port to port (computer to computer). The user can scan the entire system sequentially or designate a custom scan pattern by specifying computers and durations.

If the user has a Dual Console 8-Port console switch, scan behavior is influenced by multiple users and tiered console switches. A multiuser console switch in the primary position and any single-user console switch in the secondary position can create situations that change the scan pattern.

Example 1—User A is accessing computer 2-4 attached to the secondary console switch at Port 2 on the primary console switch while user B scans computers attached to the secondary console switch at Port 1 on the primary console switch.

Behavior—Console switch at Port 1 is available to scan; no user is accessing it. Any key pressed at the keyboard or a mouse click stops the scanning and passes the keystrokes or mouse movements to the currently selected computer.

Example 2—User A is accessing computer 2-4 while user B scans computer 2-4.

Behavior — WATCH, monitor activities of user A. Cannot use the keyboard or mouse to pass the keystrokes or mouse movements to the currently selected computer.

Example 3—User A is accessing computer 2-4 while user B wants to scan computer 2-6.

Behavior—SKIP, because user A occupies the primary port connection at Port 2, making 2-6 unavailable to user B.

Example 4—User A is accessing computer 2-4 while user B scans computer 3-2.

Behavior—Console switch at port 3 is available to scan; no user is accessing it. Any key pressed at the keyboard or a mouse click stops the scanning and passes the keystrokes or mouse movements to the currently selected computer.

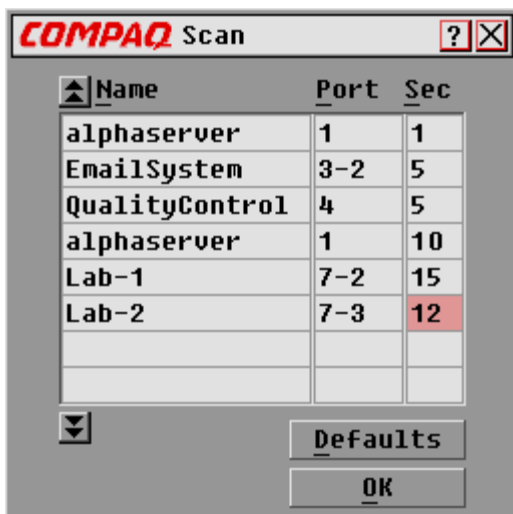


Figure 4-9: Scan screen function

Field/ Button	Function	Alternate Method
Names	Sorts computers alphabetically by name	Press the Alt + N key.
Port	Sorts computers by port number	Press the Alt + P key.
Sec	Enters the length of time a computer is selected before the scan console switches to the next computer	Press the Alt + S key.
Defaults	Returns to default settings	Press the Alt + D key.
OK	Saves changes and returns to the previous menu	Press the Alt + O key.

Note: Highlighted port indicates selected device.

To set a custom scan pattern:

1. Enter the name or port number of the computer in the **Name** and **Port** boxes for the computer to be included in the scan.
2. In the **Sec** column, enter the number of seconds, from 1 to 255, that this computer will be selected before switching to the next computer in the sequence.
3. Repeat for each of the remaining computers to be included in the scan.
4. Click **OK**. The new scan pattern replaces the standard or previous custom scan pattern.

To start the scan mode, select **Scan Enabled** from the **Commands** screen.

To cancel scan mode, deselect **Scan Enabled** from the **Commands** screen.

To remove a computer from the scan list:

1. Click the computer to be removed from the scan list.
2. Press the **Delete** key.

or

Press the **Shift + Delete** keys to delete the current computer and all computers below it.

3. Click **OK**.

Flag Screen

The status flag indicates the name or port number of the currently selected computer. If a Dual Console 8-Port console switch is being used, each console can have different flag attributes.

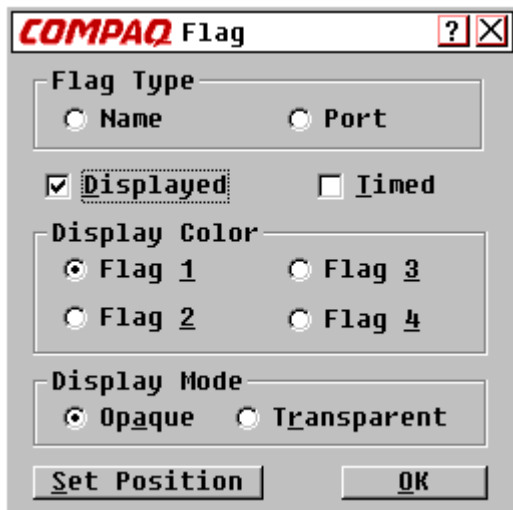


Figure 4-10: Flag screen



Figure 4-11: Status flag showing the user is connected to a computer sorted by name order



Figure 4-12: Status flag showing that broadcasting is enabled and the user is connected to a tiered computer sorted by port order

Table 4-4: Flag Screen Functions

Field/Button	Function	Alternate Method
Name	Identifies computers by name	Press the Alt + N key.
Port	Identifies computers by port	Press the Alt + P key.
Displayed	Shows flag at all times	Press the Alt + D key.
Timed	Displays flag for only 5 seconds after switching	Press the Alt + T key.
Flag 1, 2, 3, 4	Selects a color palette	Press the Alt + 1, 2, 3, or 4 key.
Opaque	Has the flag cover the desktop image	Press the Alt + A key.
Transparent	Has the desktop image seen through the flag	Press the Alt + R key.
Set Position	Positions flag on the screen	Press the Alt + S key.
OK	Saves current settings and returns to the previous screen	Press the Alt + O key.

To position the status flag on the desktop:

1. Click **Set Position**.
2. Click and drag the title bar to where the status flag will be displayed on the desktop.
3. Click **X** to exit the dialog box. The setting is saved.

Security Screen

The security feature enables the user to lock the keyboard and monitor. When the keyboard and monitor are locked, the user must enter a password before resuming operation. The user can also set a time delay before the system is locked by entering the number of seconds to delay the screen saver.

The user must provide a password to access the fields in the **Security** screen. After the correct password is entered, the other fields on the screen are activated. If a Dual Console 8-Port console switch is being used, each console can have a different password.



Figure 4-13: Security screen functions

Field/Button	Function	Alternate Method
New	Enters new password or confirm current password	Press the Alt + N key.
Repeat	Confirms new password	Press the Alt + R key.
Enable Screen Saver	Enables screen saver	Press the Alt + C key.

continued

Figure 4-13: Security screen functions *continued*

Field/Button	Function	Alternate Method
Time Delay	Enters the number of minutes before the keyboard and monitor are locked	Press the Alt + D key.
Energy	Sets the energy saver feature if the monitor is Energy Star compliant (see Caution)	Press the Alt + E key.
Screen	Operates monitor in normal mode	Press the Alt + S key.
Test	Immediately starts screen saver mode	Press the Alt + T key.
OK	Saves settings and returns to the previous menu	Press the Alt + O key.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. Do **not** use this mode if the monitor is not Energy Star compliant.

To change the password:

1. Enter the new password in the **New** field. Passwords can be up to eight characters in length. Passwords are case-sensitive and may contain both alphanumeric.
2. Enter the new password in the **Repeat** field to confirm the new password.
3. Click **OK**.

To lock the keyboard and monitor:

1. Enter the password in the **New** field.
2. Select **Enable Screen Saver**.
3. In the **Time Delay** field, enter the number of minutes (from 1 to 254) to delay activation of the screen saver.

4. Choose **Energy** if the monitor is Energy Star compliant, or **Screen** if it is not.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. Do **not** use this mode if the monitor is not Energy Star compliant.

5. Click **Test** to view the screen saver.
6. Click **OK**.

To blank the monitor without locking the console:

1. Delete the text in the **New** field and leave the box blank.
2. Select **Enable Screen Saver**.
3. In the **Time Delay** field, enter the number of minutes (from 1 to 254) to delay activation of the screen saver.
4. Choose **Energy** if the monitor is Energy Star compliant, or **Screen** if it is not.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. Do **not** use this mode if the monitor is not Energy Star compliant.

5. Click **Test** to view the screen saver.
6. Click **OK**.

IMPORTANT: This action overrides the use of a password. Pressing any key on the keyboard unlocks the console. The system is **not** secure.

To disable the screen saver:

1. In screen saver mode, press any key on the keyboard then enter the password if the console switch is password protected.
2. Press the **Print Scrn** key to display the **Main** screen.
3. Click **Setup, Security**.
4. Enter the password in the **New** field.
5. Deselect **Enable Screen Saver**.
6. Click **OK**.

Screen Saver Test

Click **OK** to activate the Screen Saver Test. After 10 seconds the user is returned to the **Security** screen.



Figure 4-14: Screen Saver Test

Broadcast Screen

The broadcast feature enables the user to simultaneously control more than one computer in a system. This feature is useful when the user wants to ensure that all selected computers receive identical input. In a tiered system, the user can broadcast to any combination of computers on the entire system.

Keyboard

The keyboard state must be identical for all computers receiving a broadcast to interpret keystrokes identically. Specifically, the **Caps Lock** and **Num Lock** modes should be the same on all keyboards.

Mouse

For the mouse to work accurately, all systems must have identical mouse drivers, identical desktops (that is, identically placed icons), and identical video resolutions. In addition, the mouse must be in exactly the same place on all screens. Because these conditions are extremely difficult to achieve, broadcasting mouse movement to multiple systems may have unpredictable results.

The console switch attempts to send keystrokes and mouse movements to the selected computers simultaneously; however, some computers may inhibit and thus delay the transmission.

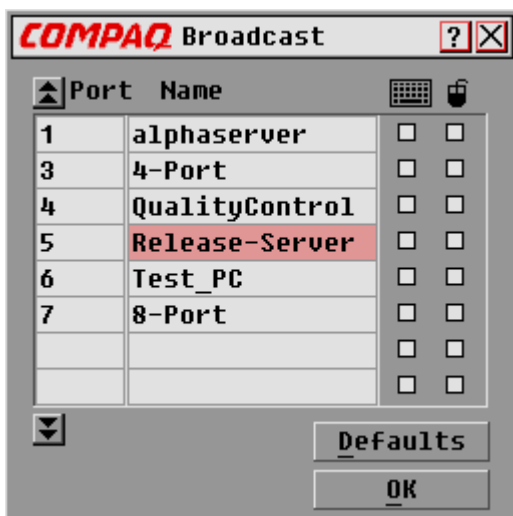


Figure 4-15: Broadcast screen functions

Field/ Button	Function	Alternate Method
Defaults	Returns to default settings (all off)	Press the Alt + D key.
OK	Saves changes and returns to previous menu	Press the Alt + O key.
Note: Highlighted port indicates selected device.		

To broadcast to selected computers:

1. Select the keyboard and/or mouse box to receive keystrokes and/or mouse movements.
2. Click **OK**.
3. Select **Broadcast Active** from the **Commands** screen to start broadcasting.

To turn off broadcast mode, deselect **Broadcast Active** from the **Commands** screen.

Broadcasting to Tiered Configurations

In a tiered system, the user can broadcast to any combination of computers on the entire system.

To broadcast to tiered configurations:

Setting Up Computers Attached to Secondary Console Switches

1. From the **Main** screen, double-click the computer name or port number of the secondary console switch to which to broadcast; press the **Print Scrn** key twice; the **Main** screen for the secondary console switch is displayed.
2. Click **Setup, Broadcast**.
3. Select the keyboard and mouse box for each computer that receives keystrokes and/or mouse movements, then click **OK**.
4. From the **Commands** screen, select **Broadcast Active** to turn on the broadcast mode for the secondary console switch.
5. Press the **Print Scrn** key to open the **Main** menu on the primary console switch.
6. Repeat steps 1 through 5 to send broadcast commands to computers attached to additional secondary console switches.

Setting Up Computers Attached to Primary Console Switches

1. From the **Main** menu on the primary console switch, click **Setup, Broadcast**.
2. Check the keyboard and mouse for each computer that receives keystrokes and/or mouse movements, then click **OK**.
3. From the **Commands** screen, select **Broadcast Active** to turn on the broadcast mode for the primary console switch.
4. From a user console attached to the primary console switch and connected to the secondary console switch, enter information and/or make mouse movements the user wants to broadcast.

NOTE: Only broadcast to systems directly connected to a primary console switch or only to secondary console switches connected to a primary console switch.

To turn off broadcast mode for a tiered configuration:

1. From the **Commands** screen at the primary console switch, deselect **Broadcast Active**.
2. From the **Main** screen, double-click the port number or name of the secondary console switch for which the user wants to stop broadcasting commands; press the **Print Scrn** twice; the **Main** screen at the secondary console switch displays.
3. Click **Commands**.
4. Deselect **Broadcast Active**.

Accessing the OSD at a Secondary Console Switch

Configuration of the console switch system is accomplished at the primary console switch. All naming, scanning, status flag attributes, menu attributes, device settings, passwords, and so on must be set at the primary console switch. The factory defaults for the OSD should not be changed in a secondary console switch because adjustments can cause conflicts between the secondary and primary console switches.

Access OSD menus at the secondary console switch to:

- Check version information of the firmware
- Set up broadcasting

- Add another level of security in tiered configurations
- Use Snapshot to save the hardware settings at the secondary console switch
- Reset mouse and keyboard information at the secondary console switch

To open the **Main** screen at a secondary console switch:

1. Press the **Print Scrn** key to open the **Main** screen at the primary console switch.
2. Double-click the number of the tiered port the user wants to access, or highlight the tiered port and press the **Print Scrn** key; the **Main** screen at the secondary console switch is displayed.

Switching Between Computers

Switching from one computer to another is a simple process with the Server Console Switch. Switching disconnects the keyboard, mouse, and monitor from one computer and connects them to another.

Whenever the user switches between two computers, the Server Console Switch reconfigures the keyboard and mouse using the settings stored in its memory. For example, if the current computer selected has the **Caps Lock** feature turned on, but the user is switching to a second computer that has the **Caps Lock** feature turned off, then the unit turns the **Caps Lock** feature off to match the setting for the second computer.

To switch computers:

1. Press the **Print Scrn** key to display the **Main** menu screen.
2. Double-click the computer name or port.

or

Highlight the port and press the **Enter** key.

or

Enter the port number or first few letters of the computer name to establish it as unique, and then press the **Enter** key.

Performing a Soft Switch

After opening the OSD menus, the user can switch between computers without having the OSD menus display.

To perform a soft switch:

1. Click **Setup, Menu**.
2. Enter in a time to delay displaying the Main OSD menu after the **Print Scrn** key is pressed.
3. Click **OK**.
4. At the **Main** menu screen, enter the port number or first few letters of the computer name to establish it as unique and press the **Enter** key.
5. To switch to another computer, press the **Print Scrn** key and enter the port number or first few letters of the computer name. If the switch is performed before the delay time has expired, the OSD menus do not display.

Performing a Screen Capture

In the Server Console Switch system, pressing the **Print Scrn** key opens the OSD menus. To print a screen capture displayed by a computer, use the following procedures:

- On a computer connected to a primary console switch, press the **Print Scrn** key twice. The first keystroke opens OSD menus in the primary console switch. The second keystroke clears the screen, sends the keystrokes through to the other device, then captures or prints the screen.
- On a computer connected to a secondary console switch in a tiered configuration, press the **Print Scrn** key four times. The first keystroke brings up the OSD in the primary console switch. The second keystroke brings up the OSD in the secondary console switch. The third keystroke brings up both OSDs. The fourth keystroke clears the screen, then captures or prints the screen.

Using the Simplified OSD

The Simplified OSD is used only with the 2-Port console switch.

Launching the OSD

Press the **Print Scrn** key to access the KVM OSD menus. To print a screen capture displayed by a computer, use the following procedure.

Printing a Screen Capture

- On a computer connected to a **primary** console switch, press the **Print Scrn** key twice.

The first keystroke opens Simplified OSD menus in the primary console switch. The second keystroke clears the screen, then captures or prints the screen.

- On a computer connected to a **secondary** console switch in a tiered configuration, press the **Print Scrn** key four times.

The first keystroke displays the Simplified OSD in the primary console switch. The second keystroke displays the Simplified OSD in the secondary console switch. The third keystroke displays both Simplified OSDs. The fourth keystroke clears the screen, then captures or prints the screen.

Simplified OSD Selection Screen

When the **Print Scrn** key is pressed to open the Simplified OSD menus, the first screen that is displayed is called the **Simplified OSD Selection** screen. Basic functions such as selecting computers and checking port/computer status are performed from this screen.

The **Simplified OSD Selection** screen lists all the ports in the system, the associated computer names, and the status of each port. It can be organized either by port number or by computer name. To identify the computers by name, refer to “Assigning Unique Names to Computers” in this chapter. To change the order in which computers are listed, refer to the section “Changing Menu Attributes.” On large systems, the user may need to use the arrow keys or the **Page Down** key to scroll through the list of ports.

Opening the Simplified OSD or Accessing the Simplified OSD Selection Screen on a Primary Console Switch

1. Press the **Print Scrn** key to access the **Simplified OSD Selection** screen at the primary console switch.
2. Highlight the number of the port to be accessed. Press the **Print Scrn** key; the **Simplified OSD Selection** screen at the secondary console switch is displayed.

SELECTION SCREEN		
Port	Name	
1	COMPUTER 1	+
2	COMPUTER 2	
F1 Help	F2 Advanced	

Figure 5-1: Selection Screen

The factory defaults for the Simplified OSD should not be changed in a secondary console switch because adjustments can cause conflicts between the secondary and the primary console switches.

Simplified OSD Status Port Symbols

+—Computer is connected and running

x—Secondary console switch is connected and running

NOTE: The Simplified OSD screens in this document are examples. The screens may vary depending on the configuration.

Simplified OSD Advanced Menu Screen

All commands, other than selecting computers, are performed from the **Simplified OSD Advanced** menus. The **Advanced Menu** screen contains two menus. The **Commands** menu displays the commands that cause an action to take place; the **Setup** menu displays menu screens to set configurations.

Opening the Simplified OSD Advanced Menus

1. Press the **Print Scrn** key to open Simplified OSD Selection.
2. Press the **F2** key.

ADVANCED MENU	
COMMANDS	SETUP
Scan	
Version	
Snapshot	
Reset	
Broadcast	

Figure 5-2: Advanced Menu, Commands

ADVANCED MENUS	
COMMANDS	SETUP
	Scan
	Names
	OSD
	Flag
	Devices
	Security
	Broadcast

Figure 5-3: Advanced Menus, Setup

The **Simplified OSD Advanced Menus** screen is displayed showing the commands listed under the **Commands** menu. Highlighting **Setup** shows screen selections available for configuring the console switch. Moving the highlight with the arrow keys or mouse in either menu selects a specific command or menu screen.

NOTE: **Broadcast** is not an available option for the 2-Port console switch.

Exiting the Simplified OSD

To exit the Simplified OSD, press the **Esc** key.

Selecting Computers

Use the Simplified OSD menus to switch computers, that is, to select which computer receives commands from and displays output to the console. When the user selects a computer, the console switch reconfigures the keyboard and mouse for the selected computer using the settings stored in its memory. The current information (for example, the state of the **Caps Lock** key) is maintained for each computer in the system. When configuration is complete, the video output of the selected computer passes to the monitor.

Switching Computers

1. If the computers are ordered by the number of the port in the **Simplified OSD Selection** screen, enter the port number of the computer to switch to.

or

Use the arrow keys or mouse to select a computer.

or

If the computers are ordered by name, enter the first letters of the computer name to establish it as unique to select it. To identify computers by name, refer to “Assigning Unique Names to Computers” in this chapter.

2. Press the **Enter** key.
3. When finished switching, press the **Esc** key to exit the **Selection Simplified OSD** screen and remove the Simplified OSD menus from the monitor display. If the status flag is enabled, it remains displayed to indicate the currently selected computer.

Assigning Unique Names to Computers

The user may find it easier to identify the computers in a system by name, rather than by port number. For example, in a network environment, the user can assign the same names as those assigned by the network for each computer. To list the computers by name in the Simplified OSD menus, refer to “Changing Menu Attributes” in this chapter.

NOTE: Before assigning names to computers attached to a secondary console switch, the user must first associate the secondary device with a port. Refer to “Assigning Specific Device Types” in this chapter.

To assign unique names to computers:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **Names** and press the **Enter** key; the **Port Name Setup** screen is displayed.

PORT NAME SETUP	
Port	Name
1	COMPUTER 1
2	COMPUTER 2

Figure 5-4: Port Name Setup screen

3. Select the port number for which a computer name will be entered or changed.
4. Enter a name for the computer. Computer names may be up to 12 characters long, including only A–Z, 0–9, and the dash character. Lowercase letters are converted to uppercase. Press the **Backspace** key to delete an incorrect entry.
5. If necessary, repeat steps 3 and 4 for each computer in the system.
6. Press the **Enter** key to save the settings and exit the menu.

or

Press the **F10** key to restore default settings.

or

Press the **Esc** key to exit the menu without saving the settings.

Changing Menu Attributes

In the **OSD Attributes** screen the user can change the order of computer ports from displaying the port number to displaying the port name. Other attributes of the Simplified OSD screens, such as the position and color, can be changed to suit the particular use of the system.

To change menu attributes:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **OSD** and press the **Enter** key; the **OSD Attributes** screen is displayed.

OSD ATTRIBUTES	
Resolution	320
Height	56
Horizontal	3
Vertical	4
Background	7
Highlight	6
Text	0
Delay Time	0
Order	PORT

Figure 5-5: OSD Attributes screen

3. Highlight the settings to change and use the **+** or **-** keys to obtain the desired value.

As the user selects different values, the effect of the changes is reflected immediately on the display. Table 5-1 describes each of the available menu attributes.

NOTE: While changing Simplified OSD attributes, it is possible to scramble the menu and screens, making it difficult to correct the problem. If this occurs, reset the console switch to its default Simplified OSD values by pressing the **Esc + Esc + Print Scrn + F10 + Y + Enter** keys.

4. Press the **Enter** key to save the settings and exit the menu.

or

Press the **F10** key to restore default settings.

or

Press the **Esc** key to exit the menu without saving the settings.

Effects of Settings on Screen Appearance

Table 5-1: Screen Appearance Settings

To change...	Select...	Values
Size of screen	Resolution	Select either 320, 480, or 640; the lower the value, the larger the size.
Size of text	Height	Higher values display larger text.
Location of screen	Horizontal	0–127
	Vertical	0–255

continued

Table 5-1: Screen Appearance Settings *continued*

To change...	Select...	Values
Color of screen and text	Background	0–7
	Highlight	0–7
	Text	0–7
Timing of Simplified OSD	Delay Time	Time in seconds the Selection screen is delayed before appearing after the Print Scrn key is pressed. Increasing delay can prevent the screen from being a distraction when performing simple computer switching operations.
Order of computers	Order	Choose to list computers by port number or alphabetically by name.

Changing Status Flag Attributes

The status flag indicates the name or port number of the currently selected computer. The user can choose to display the status flag at all times, for a few seconds after switching, or not at all. The user can also change the color of the status flag and its location on the screen.

To change status flag attributes:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **Flag** and press the **Enter** key; the **Flag Configuration** screen is displayed.

FLAG CONFIGURATION	
Enabled	PORTS ON
Row	14
Column	1
Color	2
Text	0
Mode	OPAQUE

Figure 5-6: Flag Configuration screen

3. Highlight the settings to change and use the + or – keys to adjust the values. Table 5-2 describes each of the available menu attributes.
4. Press the **Enter** key to save the settings and exit the menu.
or
Press the **F10** key to restore default settings.
or
Press the **Esc** key to exit the menu without saving the settings.

Values and Effects of Settings on Flag Appearance

Table 5-2: Flag Appearance Settings

Setting	Values	Effect
Enabled	Flag Off	Flag does not appear.
	Ports On	Indicates selected port number.
	Names On	Indicates selected computer by name.
	Ports Timed	Port number displays for 5 seconds after switching.
	Names Timed	Name displays for 5 seconds after switching.
Row	0–14	Positions the flag vertically on the screen.
Column	0–25	Positions the flag horizontally on the screen.
Color	0–7	Sets the flag color.
Text	0–7	Sets the flag text color.
Mode	Opaque	Makes the flag opaque.
	Transparent	Makes the flag transparent.

Scanning the Computers

In scan mode, the console switch automatically switches from port to port (computer to computer). The user can scan the entire system sequentially or designate a custom scan pattern by specifying computers and durations.

Placing the Switch in Scan Mode

To place the switch in scanning mode:

1. From the **Commands** menu in the **Advanced Menus** screen, move the highlight to **Scan**.
2. Press the **Enter** key.

Canceling Scan Mode

Press any key (except the **Print Scrn** key) or move the mouse; the scan stops at the currently selected computer.

Setting a Custom Scan Pattern

To set a custom scan pattern:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **Scan** and press the **Enter** key; the **Scan Pattern Setup** screen displays with the first port position (or computer name) highlighted.

SCAN PATTERN SETUP		
Port	Sec	Name
1	20	Computer 1
2	20	Computer 2
F2 for defaults		

Figure 5-7: Scan Pattern Setup screen

3. Enter the port number of the first computer to be included in the scan.
or
If the computers are listed by name, enter the first few letters of the name of the first computer to be included in the scan.
4. Move the highlight to the **Sec** column, and enter the number of seconds this computer is to be selected before switching to the next computer in the sequence.
5. Move the highlight to the next line and repeat steps 3 and 4 for each of the remaining computers.
6. Press the **Enter** key to save the settings and exit the menu; the new scan pattern replaces the standard or previous custom scan pattern.
or
Press the **F10** key to restore default settings.
or
Press the **Esc** key to exit the menu without saving the settings.

Removing a Computer from the Scan List

To remove a computer from the scan list:

1. In the **Scan Pattern Setup** screen, enter the port number of the computer to be removed.
or
If the computers are listed by name, enter the first few letters of the name of the computer.
2. Move the highlight to the **Sec** column.

3. Enter **0** for the number of seconds.
4. Press the **Delete** key while in the **Scan Pattern Setup** screen to delete the highlighted computer and all entries below it.
5. Press the **Enter** key to save the settings and exit the menu; the new scan pattern replaces the standard or previous custom scan pattern.

or

Press the **F10** key to restore default settings.

or

Press the **Esc** key to exit the menu without saving the settings.

Securing Server Access

Advanced server applications should be protected against unauthorized users. The console switch security feature enables the user to lock the keyboard and monitor, requiring the user to enter a password before resuming operation. The user can also set a time delay before the system is locked.

The user must always provide a password to access the fields in the **Security Configuration** screen. After entering the correct password, the other fields on the screen are activated.

Locking the Screen and Keyboard

To lock the screen and keyboard:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **Security** and press the **Enter** key; the **Security Configuration** screen is displayed.

SECURITY CONFIGURATION	
Password	-----
New password	-----
Repeat new	-----
Time Delay	OFF
Mode	SCREEN
Test	

Figure 5-8: Security Configuration screen

3. Enter the password and press the **Enter** key.

Passwords can be up to eight characters (case sensitive). Enter the new password twice for confirmation.

NOTE: The factory default password is OSCAR. Because the **Caps Lock** key is disabled by default, the user must hold down the **Shift** key when entering each letter.

4. Highlight **Time Delay** and select the number of minutes from 1 to 254 before the screen saver turns on.
5. Highlight **Mode** and select **Energy** if using an Energy Star-compliant monitor or **Screen** if the monitor is not of that type.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant.

6. To enable the screen saver mode press the **Enter** key either in the **Time Delay** or **Mode** fields.

or

Highlight **Test** and press the **Enter** key to start the screen saver mode immediately. Table 5-3 describes the possible settings.

Table 5-3: Security Configuration Settings

Setting	Action
Password	Enter current password to activate other fields.
New Password	Enter new password.
Repeat new	Re-enter new password to confirm.
Time Delay	Set a value from 1 to 254 minutes or select OFF.
Mode	Energy—Turns off monitor. Use only with Energy Star-compliant monitors that go into low-power mode when time delay has elapsed. Screen—Turns off video when time delay has elapsed. Use with non-Energy Star-compliant monitors.
Test	Immediately activates selected mode.

Turning off the Screen Saver

To turn off the screen saver:

1. If in screen saver mode, press any key on the keyboard and then enter the password if the console is password protected.
2. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
3. Highlight **Security** and press the **Enter** key; the **Security Configuration** screen appears.
4. Highlight **Time Delay** and select **OFF**. Press the **Enter** key.

Blanking the Monitor without Locking the Console

To blank the monitor without locking the console:

1. If in screen saver mode, press any key on the keyboard and then enter the password if the console is password protected.
2. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
3. Highlight **Security** and press the **Enter** key; the **Security Configuration** screen displays.
4. In the **Security Configuration** screen, press the **Enter** key twice with the **New Password** and **Repeat New** fields empty.
5. Highlight the settings to change and use the **+** or **-** keys to adjust values.
6. Highlight **Test** and press the **Enter** key to immediately start screen saver mode.

This action overrides the use of a password. Pressing any key on the keyboard unlocks the console. The computer will **not** be protected against unauthorized users.

Displaying Version Information

To facilitate system troubleshooting and support, the user can display the version number of the switch firmware as well as information about any auxiliary devices connected to the switch.

The **Version** screen also displays specific device information for the currently selected computer, including enabled/disabled, typematic rate, LED settings, port mode, and keyboard type for the keyboard and enabled/disabled, sample rate, resolution, and mouse type for the mouse.

To display version information and device settings:

1. From the **Commands** menu in the **Advanced Menus** screen, move the highlight to **Version** and press the **Enter** key; the **Version** screen is displayed.

VERSION			
Firmware		x.x.x	
Hardware		x x x	
Dip Switch F			
Port 1		COMPUTER 1	
Keyboard		Mouse	
ENABLED		DISABLED	
Rate	2C	Rate	100
LEDs	2	Res	2
Mode	2		
Type	101	Type Gen	

Figure 5-9: Version screen

2. To display version information for an auxiliary device, press the **F2** key.
3. Press the **Esc** key to close the **Version** screen.

Saving the Hardware Settings

Whenever computers are added or removed, to or from the system, or whenever the mouse or monitor is changed, save the hardware settings. If the settings are not saved, they are lost when power is lost or turned off, and it might be necessary to reboot each computer to re-establish keyboard and mouse communication.

To save the hardware settings:

1. From the **Commands** menu in the **Advanced Menus** screen, highlight **Snapshot**.
2. Press the **Enter** key.

Resetting the Mouse and Keyboard

If the keyboard or mouse locks up, the user may be able to recover the device settings by resetting the console switch. Resetting the mouse and keyboard attempts to restore the correct settings for the selected computer.

To reset the mouse and keyboard values:

1. From the **Commands** menu in the **Advanced Menus** screen, highlight **Reset** and press the **Enter** key.
2. If step 1 does not correct the problem, press the Reset button on the back panel of the console switch.

Assigning Specific Device Types

If the system includes one or more secondary console switches in a tiered configuration, the user must make the primary console switch aware of the secondary console switches by assigning a specific device type. In addition, if one or more of the computers in the system need a special type of monitor or other device, it may be necessary to assign that device type to the port associated with that computer.

To assign a device type:

1. In the **Advanced Menus** screen, move the highlight to the **Setup** menu.
2. Highlight **Devices** and press the **Enter** key; the **Device Settings** screen is displayed.

DEVICE SETTINGS	
Port	Monitor
1	SVGA
2	SVGA

Figure 5-10: Device Settings screen

3. To assign a secondary switch to a port, highlight the port and use the + or – keys to obtain the appropriate values.

or

To assign a monitor type, highlight the port and use the + or – keys to obtain the value that corresponds to the particular monitor.

4. Press the **Enter** key to save the settings and exit the menu.

or

Press the **F10** key to restore default settings.

or

Press the **Esc** key to exit the menu without saving the settings.

Switching Tiered Systems

To switch the Keyboard/Monitor/Mouse Switch Box to a computer that is connected to the primary through a secondary unit:

1. Press the **Print Scrn** key. The **OSD Selection** window is displayed on the monitor.
2. Enter the number of the port to which the slave unit is connected followed by a dash and the number of the port (on the secondary unit) to which the computer is connected. For example, to switch to the computer connected to port 3 of a secondary unit connected to port 1 of the primary, press the **Print Scrn, 1, -, 3** keys.
3. If the computer/secondaries are listed in the window by name, then enter the assigned name of the computer. If no secondary unit is connected to the selected primary port, the command is canceled when the secondary number is entered.
4. Press the **Enter** key.

Regulatory Compliance Notices

Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, this product has been assigned a unique Compaq series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to this series number. The series number should not be confused with the marketing name or model number of the product. The Compaq Series numbers for this product are:

- 2-Port—EO1002
- 4-Port—EO1004A
- 8-Port—EO1004B
- Dual Console 8-Port—EO1004C
- Dual Console 8-Port DC—EO1003

Federal Communications Commission Notice

Part 15 of the Federal Communications Commission (FCC) Rules and Regulations has established radio frequency (RF) emission limits to provide an interference-free radio frequency spectrum. Many electronic devices, including computers, generate RF energy incidental to their intended function and are, therefore, covered by these rules. These rules place computers and related peripheral devices into two classes, A and B, depending upon their intended installation. Class A devices are those that may reasonably be expected to be installed in a business or commercial environment. Class B devices are those that may reasonably be expected to be installed in a residential environment (for example, personal computers). The FCC requires devices in both classes to bear a label indicating the interference potential of the device as well as additional operating instructions for the user.

The rating label on the device shows the classification (A or B) of the equipment. Class B devices have an FCC logo or FCC ID on the label. Class A devices do not have an FCC logo or FCC ID on the label. After the class of the device is determined, refer to the corresponding statement in the following sections.

Class A Equipment

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at personal expense.

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit that is different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for help

Declaration of Conformity for Products Marked with the FCC Logo, United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact us by mail or telephone:

- Compaq Computer Corporation
P. O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000
- 1-800-652-6672 (1-800-OK COMPAQ) (For continuous quality improvement, calls may be recorded or monitored.)

For questions regarding this FCC declaration, contact us by mail or telephone:

- Compaq Computer Corporation
P. O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000
- 1-281-514-3333

To identify this product, refer to the part, series, or model number found on the product.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

Canadian Notice (Avis Canadien)

Class A Equipment

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Class B Equipment

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (the equivalent international standards are in parentheses):

- EN55022 (CISPR 22) – Electromagnetic Interference
- EN55024 (IEC61000-4-2, 3, 4, 5, 6, 8, 11) – Electromagnetic Immunity
- EN61000-3-2 (IEC61000-3-2) – Power Line Harmonics
- EN61000-3-3 (IEC61000-3-3) – Power Line Flicker
- EN60950 (IEC950) – Product Safety

Japanese Notice

ご使用になっている装置にVCCIマークが付いていましたら、次の説明文をお読み下さい。

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCIマークが付いていない場合には、次の点にご注意下さい。

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Taiwanese Notice

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Electrostatic Discharge

To prevent damaging the system, be aware of the precautions you need to follow when setting up the system or handling parts. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

To prevent electrostatic damage, observe the following precautions:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

Grounding Methods

There are several methods for grounding. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm \pm 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
- Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service tools.
- Use a portable field service kit with a folding static-dissipating work mat.

If you do not have any of the suggested equipment for proper grounding, have a Compaq authorized reseller install the part.

NOTE: For more information on static electricity, or assistance with product installation, contact your Compaq authorized reseller.

Power Cord Set Requirements

The power cord set meets the requirements for use in the country where you purchased your equipment. The voltage selection switch allows you to select the appropriate line voltage for the server.

Power cord sets for use in other countries must meet the requirements of the country where you use the server. For more information on power cord set requirements, contact your Authorized Compaq Dealer.

General Requirements

The following requirements are applicable to all countries:

- The length of the power cord must be at least 1.8 m (6.0 ft) and a maximum of 3.7 m (12 ft).
- The power cord set must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord will be used.
- The power cord set must have a minimum current capacity and nominal voltage rating of 10 A/125 VAC, or 10A/250 VAC, as required by the power system of each country.
- The appliance coupler must meet the mechanical configuration of an EN60320/IEC 320 Standard Sheet C13 Connector, for mating with the appliance outlet on the computer.

Country-Specific Requirements

Use Table C-1 to identify the appropriate accredited agency in your country.

Table C-1: Power Cord Set Requirements By Country

Country	Accredited Agency	Applicable Note Numbers
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	SETI	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	JIS	3
Norway	NEMKO	1
Sweden	SEMKO	1
Switzerland	SEV	1
United Kingdom	BSI	1
United States	UL	2

1. Flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.
2. Flexible cord must be Type SVT or equivalent, No. 18 AWG, 3-conductor. Wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V).
3. Appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. Flexible cord must be Type VCT or VCTF, 3-conductor, 1.0 mm² conductor size. Wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7A, 125V) configuration.

Specifications

Table D-1: Compaq Server Console Switch 2-Port Specifications

Dimensions	
Height	4.34 cm (1.71 inches)
Depth	17.8 cm (7.0 inches)
Width	25.4 cm (10 inches)
Weight	1.47 kg (3.25 lb)
Input Power Requirements	
Rated Voltage	100–240VAC
Rated Frequency	50–60 Hz
Rated Input Current	.5–.25A
Temperature Range	
Maximum Ambient Operating Temperature	10°–40° C (50°–104° F)
Ambient Storage and Shipping Temperature	-40°–85° C (-40°–185° F)
Maximum Internal Rack Temperature for the Switch Box	50° C (122° F)

continued

Table D-1: Compaq Server Console Switch 2-Port Specifications *continued*

Dimensions	
Relative Humidity (noncondensing)	
Operating	20%–80%
Nonoperating	5%–90%
Video Modes Supported	VGA, SVGA, XGA

Table D-2: Compaq Server Console Switch 4-Port, 8-Port, and Dual Console 8 Port Specifications

Dimensions	
Height	4.5 cm (1.75 inches)
Depth	20.3 cm (8.0 inches)
Width	43.2 cm (17 inches)
Weight	
4-Port	2.38 kg (5.25 lb)
8-Port	2.38 kg (5.25 lb)
Dual Console 8-Port	2.59 kg (5.70 lb)
Input Power Requirements	
Rated Voltage	
4-Port, 8-Port, Dual Console	100–240V AC
8-Port AC	36–2V DC
Dual Console 8-Port DC	
Rated Frequency	
4-Port, 8-Port, Dual Console	50–60 Hz
8-Port AC	N/A
Dual Console 8-Port DC	
Rated Input Current	
4-Port, 8-Port	1–.5A
Dual Console 8-Port AC	120mA

continued

Table D-2: Compaq Server Console Switch 4-Port, 8-Port, and Dual Console 8 Port Specifications *continued*

Dimensions	
Temperature Range	
Maximum Ambient Operating Temperature	10°–50° C (50°–104° F)
Ambient Storage and Shipping Temperature	-40°–85° C (-40°–185° F)
Maximum Internal Rack Temperature for the Switch Box	50° C (122° F)
Relative Humidity (noncondensing)	
Operating	20%–80%
Nonoperating	5%–90%
Video Modes Supported	VGA, SVGA, XGA

Troubleshooting

Table E-1: Video Troubleshooting



Symptom	Probable Cause	Recommended Solution
No video on any computer	Loose video connection	Reconnect video cable.
	Defective video cable	Replace video cable.
	No power to switch or monitor	Check the power switch.
		Reconnect the power cable.
No video on one computer	Video cable problem	Check AC outlet for power.
		Tighten loose video cable connections.
		Replace video cable.
		Turn on the computer connected to that port.

continued

Table E-1: Video Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
OSD colors or setup incompatible	Incorrect settings in Names, Flag, or Device dialog boxes	<p>Confirm that settings in these menus are properly defined (for 2-Port also check OSD menu).</p> <p>In the Commands screen, click Reset (all models except 2-Port).</p> <p>or</p> <p>Reset settings to default if necessary by pressing the F10 + Enter keys (for 2-Port console switch only).</p>

Table E-2: Status Symbol Troubleshooting

Symptom	Probable Cause	Recommended Solution
<p>No  or  shows next to computer number or name (all models except 2-Port)</p> <p>No + shows next to computer number or name (2-Port only)</p>	No live keyboard signal	<p>Tighten loose keyboard cable connections between the computer and the console switch.</p> <p>or</p> <p>Disconnect and reconnect the keyboard cable at the computer port on the console switch. (It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.)</p> <p>Then at the console switch press the Esc + Print Scrn keys.</p>

continued

Table E-2: Status Symbol Troubleshooting *continued*








Symptom	Probable Cause	Recommended Solution
 shows up on tiered port (all models except 2-Port)	Loose keyboard connection	Disconnect and reconnect the keyboard cable at the computer port on the console switch. (It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.) Replace the keyboard cable.
  shows next to computer number or name when you expected it to be a  (all models except 2-Port)	An interconnecting cable (m-m) from another switch connected to port in error	Disconnect the console switch and connect the computer to the port.
Primary computer shows   when  is expected (all models except 2-Port)	Incorrect settings in Device dialog box for primary console switch	Verify the selection of the correct number of ports (4 or 8) for a secondary console switch. Verify that all port settings are set to Default if not connected to a secondary console switch.

Table E-3: Keyboard Troubleshooting

Symptom	Probable Cause	Recommended Solution
Keyboard is not working	OSD Delay Time in effect	<p>Turn off Delay Time as follows:</p> <p>All models except 2-Port: Press the Print Scrn + Alt + S + Alt + M keys. Enter 0 secs for Delay Time.</p> <p>2-Port only: Press the Print Scrn + F2 keys. Select OSD. Enter 0 secs for Delay Time.</p>
Keyboard is not working on one computer	Keyboard worked, but then stopped working	<p>Tighten loose keyboard cable connection between the computer and the console switch.</p> <p>Replace keyboard cable.</p> <p>Check maximum cable length.</p> <p>Press the Reset button on the back panel of the console switch.</p> <p>Check maximum length of console cable extensions.</p>

continued

Table E-3: Keyboard Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
	Keyboard never worked	<p>Check cable for crossed connections.</p> <p>Replace keyboard cable.</p> <p>Disconnect and reconnect the keyboard cable at the computer port on the console switch. (It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.)</p> <p>Check for maximum cable length.</p> <p>Check maximum length of console cable extensions.</p> <p>Replace the console keyboard.</p>

continued

Table E-3: Keyboard Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
Keyboards are not working on all computers	Keyboard signal did work on all computers but then stopped	<p>Tighten loose keyboard cable connections between the computers and the switch.</p> <p>Check maximum length of console cable extensions.</p> <p>Replace the console keyboard.</p> <p>Press the Reset button on the back panel of the console switch.</p>
	Keyboard signal never did work	<p>Check the keyboard console cable.</p> <p>Check maximum length of console cable extensions.</p> <p>Replace the console keyboard.</p> <p>Press the Reset button on the back panel of the console switch.</p> <p>Tighten loose computer keyboard cable connections.</p> <p>Check computer to console switch cables for maximum length.</p>

Table E-4: Mouse Troubleshooting

Symptom	Probable Cause	Recommended Solution
Mouse error on boot, all computers	Loose mouse cable connection	Tighten loose mouse cable connections. Check for cross-connections.
	Incompatible or defective mouse	Replace mouse with PS/2 or mouse-port compatible mouse.
Mouse error on boot, one computer	Loose mouse cable connection	Tighten loose mouse cable connections.
	Defective mouse cable	Replace mouse cable.
	Using serial port on computer	Install PS/2-to-serial protocol converter.
Mouse displays erratic behavior	Computer left mouse in indeterminate state	Reset mouse through OSD or reset console switch.
Mouse pointer frozen on display	Mouse not initialized	Reset mouse through OSD or reset console switch.

Table E-5: Switch Troubleshooting

Symptom	Probable Cause	Recommended Solution
Unit switches from one system to the next at will	Scan mode initiated	Halt scanning by pressing any key or moving mouse.
Keyboard or mouse input appears on more than one computer	Broadcast mode initiated	Use OSD to exit broadcast mode.
Broadcasting grayed out in OSD menus	In use by another user console	Request other user console to deactivate Broadcasting in their OSD Menus.

Table E-6: Firmware Update Troubleshooting

Symptom	Probable Cause	Recommended Solution
Firmware does not download	Cable problems	Tighten loose cable connections. Replace serial cable. Check that the serial cable is connected to the com port on the PC computer and to the serial port on the console switch.
<i>File Not Found</i> or <i>Can't Open</i> messages received after typing the file name	Incorrect file name or path	Verify that the file name was typed correctly. Verify that the path to the file is correct. Check that file extension is correct (.bin)

continued

Table E-6: Firmware Update Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
<i>Invalid Port Number</i> message received after typing number	Incorrect com port	Check that the com port number is a numeric entry not greater than 4.
Download timed out when updating firmware	Cannot access port	Verify that the correct port was selected. If another program is using the same port, quit the program. If a serial cable is not installed or is defective, install a new cable.

Updating Firmware

The firmware for the console switch can be updated. The application code of the console switch resides in FLASH, and therefore can be quickly and easily updated. The port communication settings are automatically configured to allow direct downloading from the connected computer.

To update the firmware you need the following:

- Computer running MS-DOS or Microsoft Windows 3.1 or Windows 95/98
- Available serial communications port on the computer
- Standard serial cable (DB9-male) that connects between the switch and the PC computer
- Firmware update

To update the firmware:

1. Connect the standard serial cable to the serial jack on the PC computer and to the serial jack on the back panel of the switch.
2. Press the **Print Scrn** key to open the OSD menus.
3. Follow steps 4 through 6 if using the prompted input mode. Go to step 7 if using the single entry mode.

Prompted Input

4. If C is the drive to which the file is saved, at the DOS prompt enter:
C:\Update.exe
then press the **Enter** key.
5. At the prompt type the file name. The file name has a .bin extension. Press the **Enter** key.
6. At the prompt enter the serial port number of the computer to which the console switch is attached. Press the **Enter** key.

If the data was entered correctly, a message is displayed on the computer notifying the user that the update for the console switch is in process. Go to step 8.

Single Entry

7. If C is the drive to which the file is saved, at the DOS prompt enter:

`C:\UPDATE.EXE filename port number`

then press the **Enter** key.

If data was entered correctly, a message appears on the computer notifying the user that the update is in process.

8. When the firmware is updated, a message displays:

`100% Complete. Download completed successfully. Thank you
for using COMPAQ products.`

The switch automatically reboots after the update is completed.

NOTE: If the update was unsuccessful (because of a power outage, for example), repeat the process.

Index

Symbols and Numbers

2-Port unit, 0U installation 2-2, 2-5
4-Port unit, 0U rear rack installation 2-9
8-Port Dual Console unit, 0U rear rack
installation 2-9
8-Port unit, 0U rear rack installation 2-9

A

advanced menus, Simplified OSD 5-3
alternate configurations 3-10

B

boot straps, using B-2
Broadcast
button 4-7
screen 4-27
broadcast, active function 4-8
broadcasting
in tiered configurations 4-29
to selected computers 4-29
turning off 4-30

C

cables
connection sequence 3-3
FCC compliance statement A-4
information 3-1
length, affects quality 3-1
locking, disconnecting 3-2
cage nut, installation in rear of rack 2-10
cautions
disconnecting locking cable 3-2
possible monitor damage 4-26, 5-21
Commands
button 4-5
screen 4-5, 4-8
Compaq authorized reseller xiii
Compaq series number A-1
Compaq Server Console Switch
features 1-2
rack option kit, contents 2-1
Compaq website xiii

computers

- assigning names to 4-8
- connecting additional 3-10
- identify by name 4-32
- names, assigning on 2-Port unit 5-6
- removing 2-Port units from scan
 - list 5-13
- scanning on 2-Port 5-12
- selecting on 2-Port unit 5-4
- simultaneously controlling 4-8
- startup behavior 3-9
- switching between 4-31
- switching on 2-Port 5-6

configurations

- alternate 3-10
- sample 1-4
- tiered switch 3-10, 3-11
- tiered, figure 3-11

connecting tiers while the system is powered up 3-12

connections, making while under power 3-10

cooperative mode, setting 4-7

D

Declaration of Conformity A-3

Default button 4-12

default settings 4-9, 4-13

delay time, setting 4-7

depth

- 2-Port unit D-1
- 4- and 8-Port units D-2

device

- auxiliary, viewing information 4-10
- modifying 4-11
- type, assigning 4-11

Device Modify screen 4-13

Devices button 4-8

Devices screen 4-11

disconnect, locking cable mechanism 3-2

display order, setting 4-7

dual console, configuration, figure 1-6

E

electrostatic discharge *See* ESD

ESD (electrostatic discharge)

- obtaining additional information B-2
- precautions B-1
- preventing B-1
- storing products B-1
- transporting products B-1
- types of damage from B-1

F

failure, communication 4-11

FCC notices

- Class A Equipment A-2
- Class B Equipment A-3
- classification label A-2
- Declaration of Conformity A-3
- device modifications A-4
- mouse A-5

features, Compaq Server Console Switch 1-2

Federal Communications Commission

- notices *See* FCC notices

firmware

- updating 1-3, F-1
- version, viewing information 4-9

Flag button 4-7

flag display, customizing 4-7

G

grounding methods B-2

grounding straps

- specifications B-2
- wearing B-2

grounding, suggested equipment for B-2

H

hardware
 installation 2-1
 reset switch 1-2
 settings, saving on 2-Port 5-19
heel straps, using B-2
height
 2-Port unit D-1
 4- and 8-Port units D-2
help resources xii
help, opening online 4-3

I

installation
 2-Port 0U 2-2, 2-5
 4-Port and 8-Port side-mount 0U 2-5
 cage nut in rear of rack 2-10
 checklist 2-1
 hardware 2-1
 side-mount, securing 2-8

K

keyboard
 conventions, OSD 4-3
 enabled/disabled 4-32
 LED settings, viewing 4-32
 locking 4-25
 locking on 2-Port unit 5-15
 port mode, viewing 4-32
 resetting 4-11
 resetting on 2-Port unit 5-19
 set for simultaneous control *See*
 broadcast
 settings, saving *See* Snapshot button
 type, viewing 4-32
 typematic rate, viewing 4-32
kit, Compaq Server Console Switch,
 contents 2-1

L

language selection 4-1
left mouse button, function 4-2

M

Main screen
 description 4-5
 functions 4-5
making connections under power 3-10
master/remote 3-11
menu attributes, changing on 2-Port
 unit 5-7
Menu button 4-7
menu option, selecting 4-3
menu overview 4-4
Modify button 4-12
monitor
 blanking 4-26
 blanking on 2-Port unit 5-17
 settings, establishing 4-8
 type, modifying 4-12
 type, using default 4-12
mouse
 conventions, OSD 4-2
 enabled/disabled 4-32
 locking 4-25
 resetting 4-11
 resetting on 2-Port unit 5-19
 resolution, viewing 4-32
 sample rate, viewing 4-32
 set for simultaneous control *See*
 broadcast
 settings, saving *See* Snapshot button
 type, viewing 4-32
mouse button
 left, function 4-2
 right, function 4-2
mouse compliance statement A-5

N

- names
 - assigning to computers 4-8
 - delete from list 4-13
 - sorting alphabetically 4-5
- Names
 - button 4-5, 4-8
 - screen 4-15
- No Device selection 4-13
- NVRAM 1-2, 3-9, 3-10

O

- online help, opening 4-3
- OSD 4-1
 - accessing at a secondary switch 4-30
 - activating 4-3
 - functions 4-1
 - keyboard conventions 4-3
 - Main screen 4-5
 - mouse conventions 4-2
 - navigating 4-2
 - screen conventions 4-3
 - selection screen, opening 4-3

P

- parts
 - proper handling B-1
 - storing B-1
 - transporting B-1
- password 1-2
 - changing 4-25
 - setting 4-7

- port
 - 4-port
 - assign secondary switch to 4-14
 - selection 4-14
 - 8-port
 - assign secondary switch to 4-14
 - selection 4-14
 - delete from list 4-13
 - numbers, sorting by 4-5
 - settings 4-8, 4-12
- Port button 4-5
- power
 - outage 3-9
 - requirements D-1, D-2
 - switch 3-9
- power cord set, requirements C-1
- power-up sequence 3-9
- preemptive mode, setting 4-7
- primary switch 4-11
- programmable scanning 1-2

R

- rack, standard 1U installation 2-11
- rails
 - securing 2-10
 - sliding, attaching to the switch box 2-9
- reboot, unattended 3-9
- regulatory compliance notices A-2
- reset
 - button (OSD) 4-9
 - button, hardware 3-9
 - command 4-11
 - switch 1-2
- right mouse button, function 4-2

S

Scan

- button 4-7
- screen 4-18

Scan Enabled function 4-8

scan mode, cancelling on 2-Port unit 5-12

scan pattern, setting 4-21, 5-12

screen

- capture, conducting 4-32, 5-1
- conventions, OSD 4-3
- locking on 2-Port unit 5-15
- saver, setting 4-7
- saver, turning off on 2-Port unit 5-17

secondary switch 4-11

- assign 8-port system to 4-14
- assign to 4-port system 4-14

Security button 4-7

selection screen, accessing 5-2

series number for regulatory compliance A-1

server access, securing 5-14

settings

- default 4-13
- return to default 4-9

Setup

- button 4-5
- screen 4-5, 4-32

Simplified OSD

- exiting 5-4
- opening 5-1

Snapshot button 4-9

standard 1U installation 2-11

Standard selection 4-13

static-safe containers

- storing products in B-1
- transporting products in B-1

status flag 3-8

- changing attributes on 2-Port unit 5-10
- positioning 4-23

status port, symbols (Simplified OSD) 5-3

switch

- hardware reset 1-2
- primary 4-11
- secondary 4-11
- sliding into the rack 2-10
- startup behavior 3-8

switching between computers 4-31

switching tiered systems 5-21

symbols in text xi

symbols on equipment ix

system, preventing electrostatic damage to B-1

T

technical support xii

telephone numbers xii, xiii

temperature range

- 2-Port unit D-1
- 4- and 8-Port units D-2

text conventions xii

tiered configuration

- connecting while system is powered up 3-12
- figure 3-11

tiered switch configurations 3-10, 3-11

tools, conductive field service type B-2

U

unattended reboot 3-9

V

- Version
 - button 4-9
 - screen 4-10, 4-32
- version information, displaying on 2-Port unit 5-18
- video
 - modes supported, 2-Port unit D-2
 - supported modes, 4- and 8-port units D-3
 - switch from port to port 4-8

W

- wall plug specifications C-2
- warnings
 - disconnect power cord before connecting cables 3-4
 - do not disable power cord grounding feature 3-5
 - rack preinstallation 2-1
- website, Compaq xiii
- weight
 - 2-Port unit D-1
 - 4- and 8-Port units D-2
- width
 - 2-Port unit D-1
 - 4- and 8-Port units D-2
- wires, connecting to DC unit 3-8
- wrist straps
 - specifications B-2
 - using B-2